

STATISTICS

'News' Collects Figures on Total Production of 'Orphan' Makes

DETROIT—Data showing total production of refrigerating machines by manufacturers who are no longer active in the field are being collected by ELECTRIC REFRIGERATION NEWS in connection with completing the industry history data which was compiled last summer.

Through letters to companies which have abandoned the refrigeration business, and to individuals formerly connected with concerns now out of business, interesting production figures are being secured for refrigerating units bearing names which were prominent in industry news not so long ago.

In addition to being valuable from the standpoint of refrigeration industry history and furnishing an interesting statistical comparison, the figures should also give service men a better conception of the market which these "orphan" refrigeration units offer for service and repair work.

One of the refrigerators well-known a few years ago was the "Iroquois," made by Barber Asphalt Co., present manufacturer of road building materials and equipment, at its Iroquois Works in Buffalo, N. Y. About 10,000 household refrigeration units were produced during 1927, 1928, and 1929, and merchandised through Iroquois Electric Refrigeration Co., a sales subsidiary. The refrigeration business was liquidated during 1929.

Although only in the refrigeration business for a relatively short period of time, the United States Radio & Television Corp. of Marion, Ind., manufactured about 4,500 "U. S. Hermetic" household refrigerators before merger with the Grunow Corp. of Chicago. Factory production was on the basis of 50 to 75 units per day. The merger with Grunow resulted in the formation of the present General Household Utilities Co.

The Welsbach Co. of Gloucester, N. J., present manufacturer of water heaters and gas mantles, manufactured household electric refrigerators until about three years ago. About 12,000 household cabinet systems and 1,300 remote installation systems were built under the "Welsbach" brand name. The company also manufactured approximately 1,800 commercial refrigeration systems.

During 1932, the Clago Mfg. Corp. of Chicago entered the household refrigeration field with the "Clago" unit. Refrigerating units numbering about 1,000 were built for the company by Excelsior Motor Mfg. & Supply Co. of Chicago. Wieboldt Co., Chicago department store, contracted for the entire Clago output.

The "Ice Maid" household refriger-

ation unit was manufactured by The Lamson Co., Inc., Syracuse, N. Y., during 1926 and 1927, refrigeration activities being discontinued at the end of the latter year. During the period of active production about 1,400 units were manufactured. The Lamson Co., at present, builds automatic conveying systems for department stores and post offices.

The Coldak Corp. of New York City produced both household and commercial machines under the "Coldak" name. About 3,600 1/4-hp. household units were manufactured for the company by Metal Saw & Machine Co. of Springfield, Mass. About 2,000 were delivered and installed, and the balance was taken over by Metal Saw & Machine Co. under a lien. In addition, the Liberty Tool & Gauge Co. of Providence, R. I. (now Liberty Refrigeration Corp.) built some 50 large commercial machines for the Coldak Corp. The Coldak Corp. was reported out of business late in 1932.

Another interesting operation in the refrigeration field was that of Julius Fleischmann Holmes and his associates who manufactured the "Holmes" and "Allison" household electric refrigerators. In 1926 or 1927 Holmes acquired the Domestic Electric Refrigerator Corp. which had bought rights to make an hermetically sealed machine developed by H. R. Van Deventer, well-known patent attorney and consulting engineer, and his associates. About 500 "Domestic" units were made by Domestic Refrigerator Corp. before Holmes took the company over. Under Holmes' control, about 12,000 household refrigerators were manufactured by the company and its successor, Holmes Products, Inc. The Holmes Co. was liquidated about the end of 1929.

The Whitehead Refrigeration Co., organized as a subsidiary of Whitehead & Kales Co. of Detroit, manufactured about 500 hermetic household units with cabinets. About 1,000 open household units were made, of which approximately half were with cabinets.

Introduced some 10 or 12 years ago, the "Rice" household unit was one of the first machines to use methyl chloride. The unit was manufactured by Rice Products, Inc. of Detroit and New York City, until large-scale manufacturing activities were wound up by a receivership early in 1931. Production on a smaller scale was carried on until the end of 1932 by Rice Electric Refrigeration Co. of New York City. While actual production figures have not as yet been obtained, a reliable estimate indicates that altogether between 10,000 and 20,000 household machines were manufactured. The Rice

organization also produced somewhat less than 500 commercial units.

The American ElectrICE Corp. of New York City, later the Belding-Hall ElectrICE Corp., began experimentation about 1925 and went into production some time in 1927. Approximately 10,000 "ElectrICE" household units were manufactured before assets were sold at auction in 1928.

Although, never on an actual refrigeration production basis, Bauer Bros. Co. of Springfield, Ohio, made some 250 household machines during its few months in the refrigeration field. The company is a present manufacturer of grinding and separating machinery.

Another small operation in the refrigeration business was that conducted by Cooke Electric Refrigeration Co. of Chicago. Only about 100 "Cooke" household units were manufactured before operations were discontinued in 1930. About 10 of these machines are supposed to be in service at the present time.

The most recent large producer of household electric refrigerators to fall by the way side was Grigsby-Grunow Co. of Chicago, manufacturer of the "Majestic" unit. Manufacture of electric refrigerators was begun in 1930; and the company was an important factor in the refrigeration business for several years. A receiver in bankruptcy was appointed for the company early in 1934. It was brought out at the receiver's sale that about 109,000 Majestic household refrigerators had been built and put in service.

In 1927, Armstrong Machinery Co. of Spokane, Wash., began the manufacture of commercial refrigerating machines. About 3,000 machines of various sizes were made, the largest being of approximately 60 tons capacity. Certain of the company's assets were purchased by General Machinery Co. of Spokane which has continued production of commercial equipment.

For the purpose of completing this statistical record, individuals who are in possession of production figures for makes of machines not given above are invited to submit any available data.

LETTERS ON STATISTICS

Figures on Leading Makes

Durkee-Atwood Co.
Minneapolis

Editor:

Your representative left some literature with us pertaining to the REFRIGERATION DIRECTORY AND MARKET DATA BOOK.

Does this book give the annual production for the various manufacturers? If not, is there such a listing available?

What we desire is a list showing at least the six or seven leading manufacturers with their annual production since 1930 on both household and commercial jobs.

E. J. REILLY.

Answer: The 1935 REFRIGERATION DIRECTORY AND MARKET DATA BOOK will not contain annual production figures for the various individual manufacturers of household electric refrigerators and commercial high sides.

There is no source from which you can obtain annual production or sales by individual manufacturers for past years.

The DIRECTORY this year will be published in two volumes. Volume I will contain the names, addresses, and products of all manufacturers of refrigeration and air-conditioning equipment, while Volume II will contain all available statistical data referring to the refrigeration industry.

Monthly Sales Data

Wolverine Tube Co.
1411-1491 Central Ave., Detroit

Editor:

Please advise if you can give us the monthly production for electric refrigerators for the years 1926 through 1934 inclusive.

O. Z. KLORSCH,
Factory Manager.

Answer: Monthly sales of household electric refrigerators from January, 1930, to December, 1933, were given in the statistical section of the 1934 REFRIGERATION DIRECTORY AND MARKET DATA BOOK. These figures represent our estimates of sales by industry manufacturers to their distributors and dealers, including exports.

We do not have the records of monthly unit sales for the years previous to 1930.

Monthly sales for 1934, tentatively estimated by ELECTRIC REFRIGERATION NEWS, are as follows:

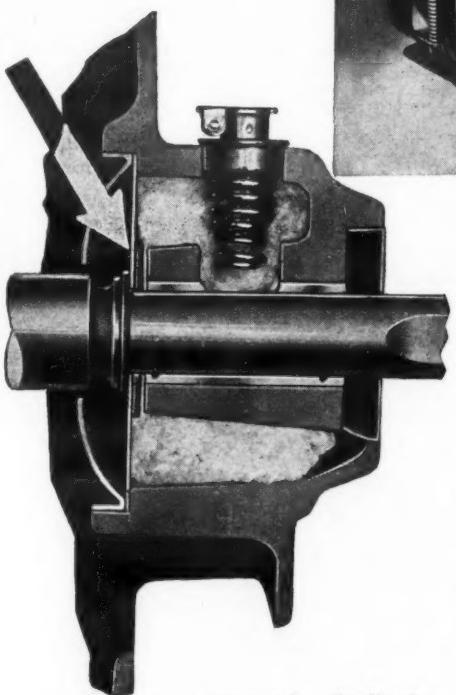
January	39,100
February	84,900
March	153,300
April	262,600
May	276,100
June	192,900
July	125,900
August	90,200
September	47,600
October	42,800
November	36,700
December	47,900
Total	1,400,000

Durable end-play silencers

TWO ON EACH MOTOR ... SPRING-STEEL CONSTRUCTION ASSURES LASTING QUIETNESS . . .



Another Exclusive Feature of the 1935 General Electric Type KC Capacitor-Motor



In the G-E Type KC capacitor-motor for 1935, end bump is effectively cushioned at both ends of the motor. Lasting, trouble-free protection is assured by per-

manently built-in construction of the two spring-steel silencers. Free movement of the rotor is retained, thus assuring quietness without wear or power loss from added friction. This is an exclusive General Electric feature.

NO OTHER MOTOR HAS SO MANY FEATURES THAT WILL HELP YOU SELL REFRIGERATORS

Check these features—see for yourself why the 1935 CARE-FREE CAPACITOR-MOTOR is the greatest value ever offered for domestic refrigerators . . .

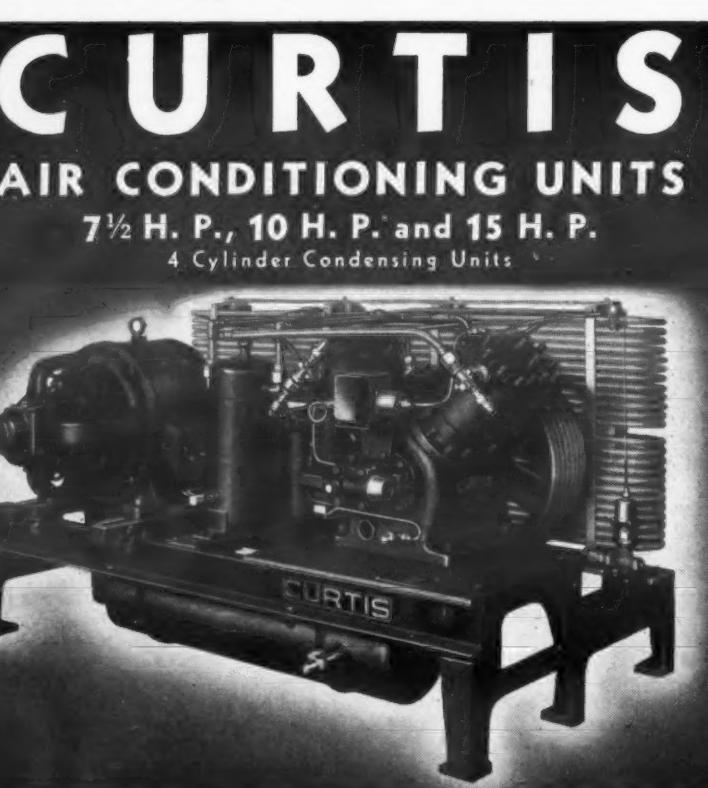
RESILIENT MOUNTING
AUTOMATIC BELT TIGHTENER
LARGE OIL CAPACITY

CAST-ALUMINUM ROTOR
BUILT-IN TERMINAL BOX
QUIET, RELIABLE SWITCH

To insure unit responsibility for the electric equipment of your refrigerator, order G-E cold-control units, and cable, with the motor. For complete information on these G-E products, address General Electric, Dept. 6-201, Schenectady, N. Y.

070-68

GENERAL ELECTRIC



With the fast growing popularity of Air Conditioning and the approach of the peak demand for this application, the completeness of the Curtis line has put Curtis distributors in an enviable position.

Some desirable territories are still open for reliable distributors:

CURTIS

CURTIS REFRIGERATING MACHINE CO.
Division of Curtis Manufacturing Co.
1912 Kienlen Avenue, St. Louis, U. S. A.

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REFRIGERATION NEWS

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DETROIT, MICHIGAN, FEBRUARY 6, 1935

Entered as second-class
matter Aug. 1, 1927THREE DOLLARS PER YEAR
TEN CENTS PER COPY**G-E Retailing Clinic Analyzes Store Problems****Leaders in Merchandising Field Describe Ways To Tap Market**

By George F. Taubeneck

CLEVELAND—Representing some 150 department stores located in cities of various sizes all over the country, more than 200 merchandising executives assembled for the third annual G-E Department Store Merchandising Clinic here last week and shared their thoughts and views on electrical appliance selling.

Summing up those thoughts and views would be next to impossible—both because of their number and multiplicity, and because of their divergence. The various talks will be reported at length, however, in this and the next issue of ELECTRIC REFRIGERATION NEWS.

Specialty selling is undoubtedly in the ascendancy in department store thinking—as revealed by the clinic—today. There was even a preponderance of opinion in favor of a re-sale operation (the "store within a store" plan of allowing local distributors to direct the merchandising of electrical appliances within a department store).

It seemed rather generally agreed that salesmen should be better trained although there were many and various views on how this best can be accomplished. More showmanship in displays, and more drama in promotion were advocated.

All thinking at the clinic seemed to lead toward closer and more intimate (Continued on Page 4, Column 1)

Belles Heads Wesco Upper N.Y. Sales

MANSFIELD—J. E. Belles has been appointed refrigeration manager for the Westinghouse Electric Supply Co. of Rochester, Syracuse, Utica, Binghamton, and Albany, N. Y., report officials of the Westinghouse Electric & Mfg. Co. of this city.

Mr. Belles' former connections in the household and commercial refrigeration sales field include positions with Niagara Hudson Power Corp., Servel Corp., Frigidaire, General Electric, American Engineering Co., and Bosse Ford Co.

Chicago Furniture Chain To Handle Crosleys

CHICAGO—General Furniture Co. of this city will handle Crosley electric refrigerators exclusively in its 12 stores, reports C. S. Tay, manager of the Crosley Distributing Corp. here.

Stout Uses McCord Pentane System To Cool Bus

By George F. Taubeneck

DETROIT—Air conditioning for passenger cars is on the road. William B. Stout, who designed the Ford all-metal tri-motor airplanes, has built a passenger car and a bus which have air-conditioning facilities.

Both cars are rear-engine-drive, and approach the ultimate in streamlining. They do not use a chassis, but are constructed on a framework of steel pipe, following aeronautical principles.

The bus, tentatively called the Stout Traveler, is air conditioned by a McCord pentane system. Because it is necessary to preheat the pentane, which is used for fuel by the Ford V-8 truck engine, the air conditioning of the bus by the McCord system really becomes a by-product. (The McCord system was described in the Oct. 3, 1934, issue of the News.)

Pentane tanks can be located at regular intervals for a bus line, but pentane isn't available at gas stations for passenger cars. So the Stout Scarab automobile must burn gasoline, and cannot employ the McCord pentane air-conditioning system.

Mr. Stout, however, believes that his passenger car can be cooled sufficiently with ice. Immediately in front (Concluded on Page 2, Column 1)

Grunow Announces Meetings Schedule

CHICAGO—Six factory crews will carry the 1935 Grunow sales message to all parts of the country, in a series of dealer-distributor meetings this month and next.

Meetings will start Thursday (Feb. 7) in Cleveland, and will wind up March 20 in Plattsburgh, N. Y. The territory has been cut six ways, and a crew delegated to each, to speed introduction of the new radio and electric refrigerator models and sales promotion plans to dealer groups.

The first group is headed by H. C. Bonfig, vice president in charge of sales, J. J. Davin, sales promotion and franchise department manager, Dr. J. J. Jordan, laboratory director, and F. H. Schnell, short wave radio engineer, assisted by divisional managers H. E. Young, H. C. McRae, William Humphrey, J. T. Dalton, and G. H. Kiley.

Meeting schedule of this group is: Feb. 12, Peirce-Pheips Co., Philadelphia; Feb. 13, Colen-Grunow Co., Newark; Feb. 15, Stern & Co., Hartford, Conn.; Feb. 18, Howe & Co., Boston; Feb. 20, Morris Dist. Co., Syracuse, N. Y.; Feb. 22, Brown Dorrance Elec. Co., Pittsburgh; Feb. 25, The Front Co., Wheeling, W. Va.; Feb. 27, Electric Appliance Dist., Altoona, Pa.; March 1, Doubleday-Hill Elec. Co., Washington, D. C.; March 4, Doubleday-Hill Elec. Co., Baltimore.

March 6, Nassau Dist. Co., Trenton, N. (Concluded on Page 2, Column 5)

Air Conditioner Jobs in Chicago Show Big Gain**Total of 239 Installations Nearly Double Those Made in 1933**

CHICAGO—A total of 239 air-conditioning installations were made in the city of Chicago during 1934, according to a survey just completed by Knight C. Parter of the air-conditioning division of the Commonwealth Edison Co.

Number of installations made was almost double that of the 126 systems installed during 1933.

From the standpoint of various types of market classifications, the tabulation indicates that:

1. There were more installations made in beauty shops, drug stores, clothing stores, shoe stores, and fur stores in 1934 than existed prior to 1933.

2. The number of residential installations were more than doubled in 1934.

Industrial applications doubled those of 1933 both in number and horsepower.

4. Despite the rapid strides made in the newer markets, offices, theaters, and restaurants continued to be the largest classifications.

Most interesting development in air conditioning in Chicago during 1934, (Concluded on Page 10, Column 3)

Hamburg Will Handle Stewart-Warner Line

CHICAGO—Hamburg Brothers, appliance distributing firm of Pittsburgh, has signed to handle Stewart-Warner's line of household electric refrigerators, reports Frank Hiter, vice president and general manager.

Elmer Hamburg is president of the distributing firm, Harold Kay is general sales manager, and Frank H. Stienling is manager of the refrigeration division.

Kurtzmann Shows Gibson Line in Buffalo

BUFFALO—C. Kurtzmann Co., distributor for Gibson electric refrigerators in western New York and northern Pennsylvania, was host to dealers from its territory at a showing of the new Gibson line here last week.

Howard Rice, president of the Kurtzmann Co., presided at the meeting, and speakers included Elmer Born, Gibson eastern representative, and C. McConville, representing the Great Lakes Finance Corp.

Tom Dwyer of the Buffalo Times reported that the Kurtzmann Co. had taken a schedule of 10 pages in color to advertise the Gibson refrigerator.

Buckeye to Make But One Model This Year

MANSFIELD—Domestic Industries, Inc., manufacturer of Buckeye electric refrigerators, is restricting its 1935 line to a single model, a unit of 6 cu. ft. net storage space and 10 sq. ft. shelf area.

The model, to be known as Model 600 Buckeye, has a Holland-Rieger cabinet which is 55% in. high, 27½ in. wide, and 21½ in. deep. Exterior finish is in lacquer, and the interior is in porcelain. Thermocraft insulation is used, 2 in. in the top and back, and 3 in. in sides, door, and bottom.

Model 600 has four ice cube trays, with a capacity of 84 cubes or 6 lbs. of ice at a freezing.

The unit is powered by a one-cylinder Dayton reciprocating compressor with an i.m.e. rating of 100 lbs., using a ¼-hp. Emerson motor, and located above the food storage chamber. A Bush or McCord finned tube, condenser is used.

Norge Output Not Stopped By Fire

MUSKEGON, Mich.—Norge Corp.'s plant at Muskegon Heights was back in production 24 hours after a fire, which broke out last Tuesday night (Jan. 29) in the boiler room, had caused a temporary cessation of manufacturing operations.

Extent of the damage has not been determined as yet, but the loss will be fully covered by insurance, states Howard E. Blood, president of Norge.

Steam from two Pere Marquette locomotives rushed to the plant the morning after the fire enabled the assembly line to resume operations the day after the fire, Mr. Blood declared. The plant was in full operation the Monday following the fire.

Principal damage was done in the superstructure surrounding the new boiler, which was just being completed as the final step in the company's 1934 building program.

Heavy fire walls and the quick response of the Muskegon Heights and Muskegon fire departments were credited with having saved the rest of the plant from damage.

Mr. Blood, Herbert N. Morley, director of engineering and research, and E. C. Graham, Norge production manager, arrived at the plant early Wednesday morning to assist in plans for immediate resumption of activity.

Indianapolis G-E Distributor Changes Firm Name

INDIANAPOLIS—Name of the Hoosier Electric Refrigerator Corp., Indianapolis distributor for General Electric refrigerators and other G-E appliances, has been changed to Electric Appliances, Inc.

Ward Line Has Deluxe Features Modern Styling**Six Montgomery Ward Models Characterized By New 'Gadgets'**

CHICAGO—Montgomery Ward & Co.'s 1935 line of household electric refrigerators is made up of five models, distinctively styled in the modern streamline fashion, embodying a number of convenience features and refinements, and ranging in size from 4 to 7.44 cu. ft. net storage capacity.

Two largest models are in the deluxe series, and are sized at 6.35 and 7.44 cu. ft. net capacity. The units are finished in wax-polished lacquer, with interiors of acid-resisting porcelain, the corners rounded to permit easy cleaning. Hardware on these models is chrome-plated, to harmonize with the design of the cabinet exterior.

Added features embodied in the deluxe models are a chrome-plated enclosed cooling unit, located at the top center, and equipped with a rubber ice tray to permit easy removal of ice cubes. The freezing regulator, on the cooling unit, has (Concluded on Page 2, Column 4)

Valves & Fittings Code Amendment Proposed

WASHINGTON, D. C.—The NRA Code Authority for the Refrigeration Valves and Fittings Manufacturing Industry has made application for termination of the exemption conferred in Paragraph III of Administrative Order No. X-26 whereby members of its industry whose principal line of business is embraced in a trade or industry subject to another code, were exempted from obligation to contribute to the expense of the Valves and Fittings Industry code administration.

The Code Authority declares that there are no members of the refrigeration valves and fittings industry whose principle line of business is the manufacture of refrigeration valves and fittings as covered by the definition of the approved code for this industry.

According to the Code Authority, there are seven manufacturers of refrigeration valves and fittings, all of whom have other products as their principal line of business.

If the termination to the exemption is not granted and arrangements made to collect a fair and equitable amount from all members of the industry, states the report, the only amounts that can be collected will be through voluntary contributions. These will not provide sufficient funds to administer the supplementary code, the Code Authority declares.

Stout's New 'Mystery Car' with Engine in Rear Is Air Conditioned

(1) This is the nose of the Stout Scarab car. (2) Where you now see a spare wheel, a cake of ice will be placed in summer for air-conditioning purposes. (3) Side view of the rear end. (4 and 5) Two views of the streamlined rear-end, wherein repose the Ford V-8 engine which powers the Stout Scarab.



(1) Rear view of the Stout Traveler bus. (2 and 3) Close-ups of the Stout Scarab passenger car. (4 and 5) The Stout Scarab draws up alongside the editor's Auburn, giving an idea of the Scarab's size in comparison with a more familiar car. The Scarab is wider, higher, and shorter. (6) Inventor Bill Stout, himself.

Stout Uses McCord System to Cool Bus

(Concluded from Page 1, Column 2) of the driver's seat is a spare tire compartment. Remove the spare tire, put in a cake of ice, draw the oncoming air over the ice and through a dryer and cleaner, and you have a species of air conditioning for occupants of the car.

Details of this latter system will be worked out when Mr. Stout returns in March from Florida, for which he left in his first Scarab car Friday, Feb. 1.

(Last summer Howard Mateer, then advertising manager of ELECTRIC REFRIGERATION News, drove a Ford sedan all over the middle west through the hottest weather in complete comfort by closing all the windows and putting a large cake of ice in the rear seat before starting each trip.)

Body and chassis are built as a unit. Drawing on his experience with airplanes, Stout has constructed the car upon a frame of alloy steel hoops. He contends that strength and safety have been improved.

Interior space has been increased with the elimination of running boards. Floor of the interior is unbroken by ridges.

The idea of streamlining the car in all directions is to facilitate steering no matter what direction the wind may blow, rather than for the sole purposes of reducing wind resistance and increasing speed. The car derives its name from this form of streamline design—which resembles the Egyptian insect of that name.

Unusual spaciousness characterizes the interior. Overall length is no greater than that of the average small automobile, yet there is comfortable seating capacity for five, with lots of room to spare in the center.

Passenger seats are removable, and may be arranged so as to permit the playing of games around a folding table.

Individual spring suspension on all four wheels is a feature. Airplane landing gear and coil springs are used. Large oil cylinders, known in aviation as "oleos," absorb shocks. "Oleos" extend from above the axles to a point even with the lower window line, creating thereby what is described as a "pendulum ride."

As a demonstration of the riding qualities, a typical test is to place a light ash tray on a table in the body of the car. After an hour's run over rough roads the ash tray remains at its original location, declares Mr. Stout.

It has been common during the runs of the experimental car for four passengers to gather about the table for bridge, and even to enjoy a light meal while the car travels at 50 miles an hour. The car, however, is no longer than any of the full-sized cars in the low-priced field.

The Stout theory of weight distribution is based on the idea of providing easier steering by removing some of the weight from the front axle; also by providing additional weight over the rear axle. Both of these points

The "big book" which Westinghouse dealer meeting crews carry with them holds the key to Westinghouse sales plans for 1935. The crew, which conducted the meeting in Detroit last week held under the direction of W. L. Howlett, refrigeration sales manager for Westinghouse Electric & Supply Co. of Detroit, consists of the following: (left to right) H. E. Hugo, J. E. Berno, and Boyd Shepler, all of the factory sales promotion department; J. F. O'Donnell, central merchandising manager; J. E. Hugo, central promotion manager; Paul Endriss, factory sales promotion department; J. W. Johnston, central refrigeration supervisor; Clyde Moran, factory refrigeration sales; J. Baughman, commercial sales department.

have been accomplished by placing the engine at the rear.

Other advantages claimed for the re-location of the motor are elimination of noise and odors. Furthermore, in case of accident due to collision, a "cushioned shock" results, instead of a direct impact as occurs with a front engine car.

Stout compares this "cushioned shock" to two hammers colliding. If the hammer ends hit, there is an immediate impact, and both stop short and bounce back with a very definite and immediate shock.

If the same two hammers hit with the handle ends first and the heads in back, the flexibility even of the hickory handles will cut the impact by two-thirds. This is because a time element has been introduced in absorbing the shock.

Control mechanism is conventional, with power brakes as standard equipment.

The driver's seat is stationary. Two movable chairs occupy the right front. On the rear cross-seat is room for two people, giving the car five-passenger capacity. Forward of the rear seat is a folding table on which passengers may play cards, serve light meals or drinks.

The Scarab is priced at \$5,000. Philip K. Wrigley, one of Stout's backers when he designed the metal airplane, has agreed to take car No. 1. Only 100 will be built in 1935.

The domestic refrigeration advertising campaign, as explained in a skit by Paul Endriss of the sales promotion department and J. E. Hugo, central district promotion manager, called for full and double-page spreads in Saturday Evening Post, Collier's, Good Housekeeping, McCall's, American, Ladies' Home Journal, and Better Homes and Gardens, with heaviest displays during May, June, and July.

A program of state and local advertising was outlined, to be opened with a full-page display in the Detroit News on Sunday, Feb. 24, the day before the formal showing of models. Dealers will also be furnished with mats for use in their local newspapers.

The poster advertising program includes two months of poster service at various points in dealers' territories, tied up with the newspaper and magazine program.

Twenty weeks of radio advertising has also been scheduled over station WWJ, Detroit, and a series of movie sound shorts, lasting approximately one minute, is available to dealers for use in the local theaters.

The entire presentation program was arranged in dramatic style, interspersed with short talks by W. L. Howlett, sales manager of Westinghouse Electric Supply Co., Detroit distributor; J. F. O'Donnell, central merchandising manager; C. H. Moran, assistant to the refrigeration sales manager; and J. B. Baughman, assistant to the commercial refrigeration manager.

Skits in which J. W. Johnston, Mr. Hugo, Mr. Endriss, and Mr. Baughman were players outlined problems facing dealers and salesmen, and suggested ways and means of meeting them.

Mr. Moran introduced the domestic refrigerator series, and Mr. Baughman the commercial series, with special emphasis on the new streamlined water coolers. The Quota Busters' Club was explained by Mr. Moran, and R. W. Badgros of Saginaw was presented with a gold watch.

Copeland DEPENDABLE ELECTRIC REFRIGERATION

ABILITY

The ability of a product to do the work for which it was designed is largely a matter of the ability of the manufacturer behind the trademark.

Ability in this sense means much more than the desire to manufacture first-class merchandise—it implies Experience, Skill, Facilities and Financial Responsibility.

Behind every product carrying the Copeland name is an 18 year tradition of dependable production, skilled personnel, superb manufacturing facilities and adequate financial backing.

Copeland Commercial Condensing Units and Domestic Refrigerators are built to deliver their full rated capacity in an economical, dependable and efficient manner.

Distributors handling the Copeland lines are thus thoroughly satisfied with the product and more than pleased with the liberal franchise under which they market this merchandise.

Interested distributors are invited to write for details of our exclusive territorial representation contract.

COPELAND REFRIGERATION CORP., Detroit, Mich.
Main Office and Factory—Holden at Lincoln Ave.
Division of DALLAS E. WINSLOW, Inc.

Westinghouse Takes to the Road

ALL EYES ON Westinghouse IN 1935



Westinghouse Outlines Advertising Program

Ward's 1935 Models Have New Features

(Concluded from Page 1, Column 5) eight freezing speeds. Ice cube trays are also furnished with an easy-out release to free frozen trays speedily.

Shelves are of diamond-grid type, with flat surfaces, to prevent dishes from tipping and to provide maximum storage space. A lift-shelf folds back to give extra storage space for tall bottles.

Classified food storage is provided on the deluxe models through three drawer-type compartments on the bottom shelf. The first is for vegetables, with a porcelain cover that opens and closes automatically; the second, a dairy drawer, provides storage space for eggs and butter; and the third is fitted with three covered crystal dishes for left-overs.

These models also carry a rearrangement shelf on the inside of the door, on which food may be placed while the contents of the refrigerator are being shifted about.

Powering the units is a twin-cylinder super-powered compressor, with an overload capacity to handle extreme summer temperatures. Full-sealed insulation, air-tight and moisture-proof, promotes efficient and economical operation.

The 7.44-cu. ft. model has a shelf area of 16.25 sq. ft. and is equipped with four ice trays making 112 cubes or 9 lbs. of ice at a freezing.

On the 6.35-cu. ft. model, the shelf area is 13.65 sq. ft., and three ice trays furnish 84 cubes, 6½ lbs., at a freezing.

The other three models in the Montgomery-Ward line are powered by a single-cylinder compressor, and do not come equipped with the convenience features which characterize the deluxe units. Cabinet styling also differs in detail from the higher-priced models.

The 5.50-cu. ft. model has a total shelf area of 11 sq. ft. It is finished in Dulux, with two-tone chrome-plated hardware, and the interior is of porcelain, with shelves of the flat-bar type.

Freezing compartment is open on this model, and the three ice trays have a capacity of 63 cubes, or 5 lbs. at a freezing.

The cabinet on the 4.14-cu. ft. model is of wax-polished lacquer, with rounded porcelain interior. Shelf area is 8.72 sq. ft., and ice cube capacity 63 cubes or 4 lbs. per freezing. The freezing compartment is sealed.

Smallest model in the line is the 4-cu. ft. unit, with a total shelf area of 7½ sq. ft. Exterior finish is Dulux, with two-tone chrome hardware of modern design, and three ice trays furnish 54 cubes, 4 lbs. of ice. The unit's two full shelves and one half shelf are conveniently arranged.

Ryan Radio is Spartan Kansas City Agency

KANSAS CITY—The Ryan Radio & Electric Co. of this city will distribute Spartan electric refrigerators in western Missouri and eastern Kansas.

George Ryan is head of the Ryan Radio & Electric Co.

Grunow Announces Meetings Schedule

(Concluded from Page 1, Column 2) J.; March 8, Shapiro Spgs. Goods Co. Newburgh, N. J.; March 11, Morris Dist. Co., Albany, N. Y.; March 13, Morris Dist. Co., Binghamton, N. Y.; March 14, Anthracite Radio Sales, Scranton, Pa.; March 15, Rochester, N. Y.; March 18, Buffalo; March 20, A. H. Marshall Co., Plattsburgh, N. Y.

The second group, under the direction of Duane Wanamaker, advertising director, and L. M. Holsapfel, assisted by divisional managers C. A. Gilmore, Otto H. Bowman, and H. T. Stockholm, will hold meetings in the following cities:

Feb. 8 to 14, Harry Alter Co., Chicago; Feb. 18, J. Geo. Fischer & Sons, Saginaw, Mich.; Feb. 20, Specialties Dist. Co., Detroit; Feb. 21, Republic Dist. Co., Grand Rapids, Mich.; Feb. 22, Cloud Brothers, South Bend, Ind.; Feb. 25, Maurer-Greusel Co., Milwaukee.

Feb. 27, Midwest-Timmermann Co., Davenport, Iowa; March 1, Midwest-Timmermann Co., Dubuque, Iowa; March 4, Grunow Northwest Sales, St. Paul; March 6, Kelley-How-Thomson Co., Duluth, Minn.; March 11, Kelley-How-Thomson Co., Billings, Mont.

Led by H. H. Kunkler of the sales and advertising department and A. L. Burliegh, refrigeration and radio engineer, and assisted by divisional managers H. T. Stockholm and A. A. Dunlap, the third crew will explain the 1935 Grunow plan to dealers in the southern sections. Its meetings schedule:

Feb. 11, Brown Supply Co., St. Louis; Feb. 13, Midwest Grunow Co., Kansas City; Feb. 15, Southwest Dist., Wichita, Kan.; Feb. 18, Sides-Duda-Myers Co., Lincoln, Neb.; Feb. 20, Sides-Duda-Myers Co., Omaha; Feb. 22, Sides-Duda-Myers Co., Des Moines; Feb. 25, Moore, Bird & Co., Denver; March 1, Hughes-Barzth-Anderson, Oklahoma City; March 4, Radio Equipment Co., Dallas; March 6, Southern Equipment Co., San Antonio, Tex.; March 8, Houston, Tex.; March 13, Car Parts Depot, El Paso, Tex.

J. H. Rasmussen of the sales and advertising department and F. H. McCarthy, refrigeration and radio engineer, are in charge of the group which will visit Cleveland and other cities in Ohio, Indiana, and Kentucky. Assisting is Divisional Manager G. H. Deacon. The schedule includes:

Feb. 7 to 16, Arnold Wholesalers Corp., Cleveland; Feb. 18, H. Poll Electric Co., Toledo; Feb. 20, Tracy Wells Co., Columbus, Ohio; Feb. 22, Griffith Dist. Corp., Dayton; Feb. 25, Griffith Dist. Corp., Indianapolis; Feb. 27, Griffith Dist. Corp., Cincinnati; March 1, Peaslee-Gaulbert Corp., Louisville; March 4, Flat Top Supply Co., Bluefield, Ky.; March 6, Air-Ola Radio Co., Huntington, W. Va.

Richmond, Norfolk, and points south will be visited by a group under the leadership of H. B. Griggs of the sales and advertising department and Warren Funk, engineer, assisted by F. M. Bewsher and E. F. Lindgren, divisional managers. The itinerary of this group:

Feb. 11, Benton-Bailey Co., Richmond, Va.; Feb. 13, Benton-Bailey Co., Norfolk, Va.; Feb. 15, Southern Radio Co., Charlotte, Va.; Feb. 18, Atlanta; Feb. 20, Sheffield Co., Americus, Ga.; Feb. 22, Jacksonville and Tampa, Fla.; Feb. 25, E. E. Forbes & Sons, Birmingham, Ala.; Feb. 27, Modern Appliance Co., New Orleans; March 1, Refrigeration Sales, Shreveport, La.; March 4, W. B. Davis Electric, Little Rock, Ark.; March 6, W. B. Davis Electric, Memphis, Tenn.; March 8, Nashville Chair Co., Nashville, Tenn.

The sixth group will travel westward to California, starting its meeting series at Los Angeles and working back toward Chicago. Meetings will be held in the following cities, under the direction of Mr. Griggs and James Vultor, engineer, assisted by Carl Boyd and W. S. Darden, divisional managers:

Feb. 11, Watson & Wilson, Inc., Los Angeles; Feb. 14, Geo. H. Eberhard Co., San Francisco; Feb. 18, F. B. Connally Co., Portland, Ore.; Feb. 20, F. B. Connally Co., Seattle; Feb. 22, F. B. Connally Co., Spokane, Wash.; Feb. 25, Oakley Electric Co., Boise, Idaho; March 1, Strevel-Paterson Hdws., Salt Lake City.

REFRIGERATOR FRUIT DISPLAY

Durable composition Fruits, Vegetables, Meats, Fowl, etc. Natural colors, very realistic. Send for sample set of 28 pieces. \$6.25

Display Kit packed to your individual requirements.

Roman Art Co., Inc.

2700-6 Locust Blvd.

St. Louis, Mo.

THE MASTERCRAFT ADJUSTABLE PAD AND CARRYING HARNESS

The most economical and convenient pad and harness for the delivery and handling of automatic refrigerators.

Both pad and harness are adjustable to practically all sizes and makes of automatic refrigerators, necessitating the purchase of one size only. Sturdily constructed for safety, thorough protection and long service. Name of refrigerator attractively lettered on pad without charge.

PAD \$9.50 each

CARRYING HARNESS \$6.00 each

Pipes per complete set \$1.75 extra

(Pipes furnished only when specified.)

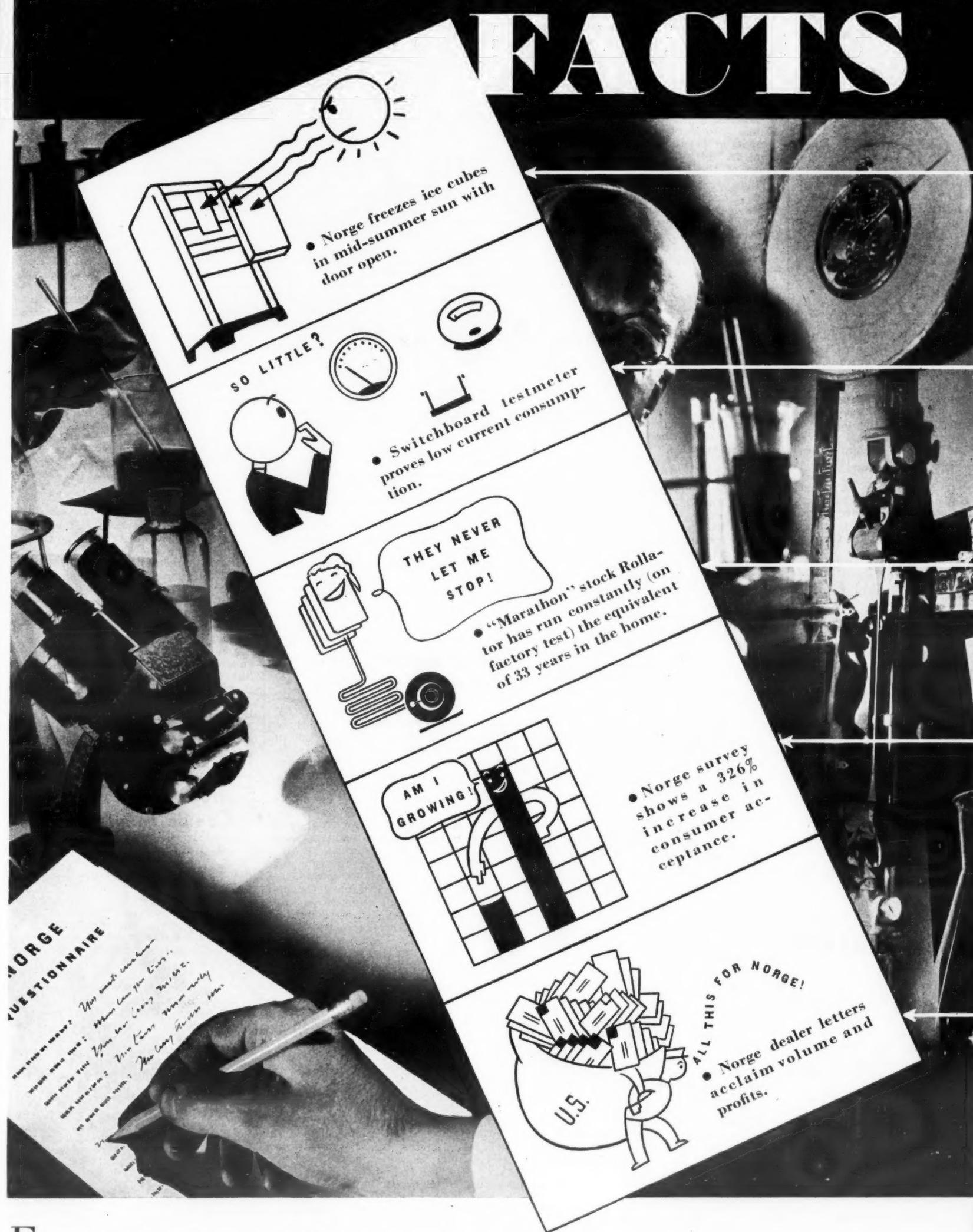
PROMPT SHIPMENT FROM STOCK

BEARSE MANUFACTURING CO.
3815-3825 Cortland Street, Chicago, Illinois

All phones: Belmont 8710

The story of Norge success is one of scientifically determined . . .

FACTS



Electric Refrigeration is at flood tide, and Norge is riding the crest of the wave. Every year has shown substantial increases in Norge volume, and 1935 will mark new records. Join Norge now.

Norge is engineering minded and sales minded. As a division of Borg-Warner Corporation, Norge carries on the traditions of fine engineering leadership which have always characterized the parent company. The result—Rollator Refrigeration, with advanced beauty of design, surpassing efficiency, convenience and economy.

Norge Sales Plans are carried out on the same basis of scientifically-determined facts as its engineering. Extensive surveys and

exhaustive tests give Norge dealers effective sales tools the year around that result in added volume and profits.

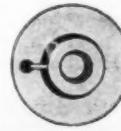
Write, wire or phone, now, for the Norge dealer plan.

NORGE CORPORATION

Division of Borg-Warner Corp., 606-670 E. Woodbridge St., Detroit, Mich.

NORGE

Rollator refrigeration



THE ROLLATOR... Smooth, easy, rolling power instead of hurried back-and-forth action of the ordinary refrigerator mechanism. Result—more cold for the current used. Only Norge has the Rollator.

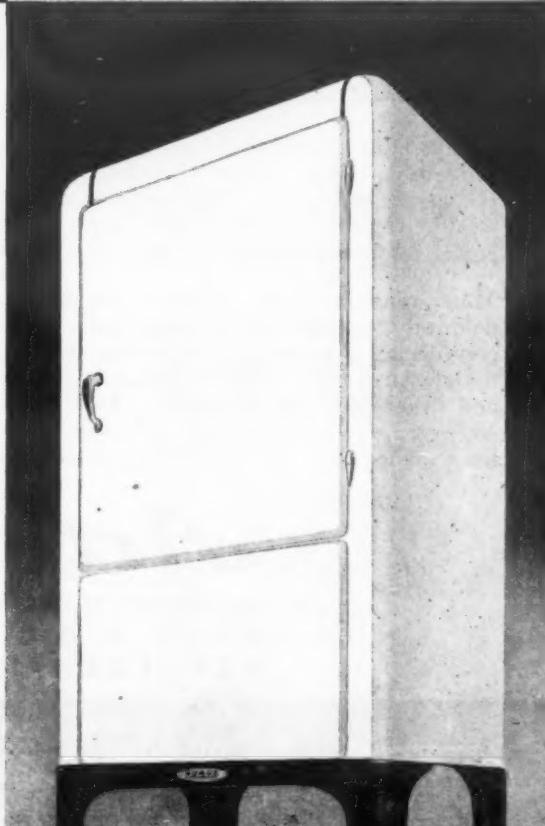
PROOF OF SURPLUS FREEZING POWER

PROOF OF LOW ELECTRIC CURRENT CONSUMPTION

PROOF OF LONG LIFE

PROOF OF CONSUMER ACCEPTANCE AND SALES APPEAL

PROOF OF DEALER VOLUME AND PROFITS



DEPARTMENT STORES

G-E Clinic Discusses Ways to Tap Home Modernization Market

(Continued from Page 1, Column 1)
cooperation between manufacturer and retailer than ever before. Gone is the old buyer-seller relationship of mutual suspicion and antagonism between manufacturers and department stores. The attitude now seems that of two merchandising forces working together in harness.

Department Store Tie-in With FHA Explained

The principal speaker at the opening sessions was J. A. Hall, special representative of the Federal Housing Administration, Washington, D. C., who spoke on the subject: "How department stores can tie in with the Federal Housing movement."

"A survey made a year ago by the Department of Commerce indicated that 16,000,000 American homes need some type of repair," he stated. "Our first job is to remedy this condition and this is being done throughout the country, through Better Housing campaigns. Men are being put back to work and taken off relief rolls."

"The same survey of the Department of Commerce indicated an actual shortage today of a minimum of 1,750,000 homes in the United States. These new homes we hope will be erected under the higher housing standards created by the regulations of the Federal Housing Administration and more soundly financed under these same regulations than ever before."

5 Billion Dollar Market

"The entire program presents a potential market for 1935 of no less than \$5,000,000,000. These figures are based on most conservative estimate that only one-half of the 16,000,000 home owners are in a position at the present time to finance the repair of their homes or to secure the credit permitted under the Housing Act for this purpose."

"In addition, the figures include the normal production of new homes for the year and if both of these condi-

tions can be brought about in 1935, it has been estimated that there would be spent in addition, \$175,000,000 for draperies and curtains and \$800,000,000 for furniture to be used in these reconditioned and new homes."

"Aside from the construction industry itself, there probably is no group in America that can possibly cash in on this program to a greater extent than the department stores.

Women Play Big Part

"A great proportion of your business is carried on with women. These women control a major portion of our spending. They have it in their power to quicken our programs toward recovery and because of your influence with these women you have an extraordinary responsibility."

"More than 700,000 men have been taken off relief rolls in the last few months as a result of FHA activities. More than 5,000 communities have inaugurated Better Housing campaigns. Men are being put back to work and taken off relief rolls."

"Many department stores have set up 'Better Housing Booths' where information and advice is supplied home owners regarding the Federal Housing Administration campaign for repair and modernization, and tie in their own business with the inquiries. The movement also can be advanced by attractive window displays and numerous other methods."

"It is not a wild dream to hope that FHA activities will put 2,000,000 men back to work in the construction industry during 1935. If this is possible, it quickly will be realized that they will carry back with them many thousands more in other lines of work. This cannot help but mean an increased demand for electrical appliances and every article carried by department stores."

Hall, in concluding, predicted the next 10 years would see the greatest building period in the country's history.

Freeman Barnes, sales promotion manager of General Electric's lamp division, told of the company's "Better Light-Better Sight" campaign and

said that this campaign was only in its beginning stages.

He described activities inaugurated by numerous power and light companies in using crews of young women to make surveys of resident lighting conditions, and told of the opportunity offered department stores for the sale of incandescent lamps and lamp fixtures as the result of the movement. Hundreds of girls now are being employed in this work, and the number rapidly is being increased, he said.

Have Advisory Bureau

Miss Jessica Meek, head of the J. L. Hudson Company's Home Advisory Bureau, told of the value of the Bureau in producing business for the store and of its importance as an adjunct of the housewares department.

Hudson's Bureau has grown from a staff of one to five people. The Bureau supervises the operation of several model kitchens including a complete General Electric kitchen.

"We give advice on completely remodeling kitchens," said Miss Meek, "and carry all materials in our store, necessary for making the improvements. We conduct cooking schools regularly, our canning schools, held twice a year, being among the most popular of our many kitchen demonstrations."

"From 35,000 to 42,000 people visit our model kitchens each month which gives us a wide opportunity to sell many articles of merchandise. The work of the Bureau in conjunction with our housewares department has become one of the store's most productive activities."

Washington Situation

John Guernsey, editor of the *Retail Ledger*, Philadelphia, presented an intimate review of what is going on behind the scenes in Washington, and the possibility of new legislation that might tend to affect business.

He said the President now was far more conservative than he ever had been, and certainly had no desire to do anything that might tend to embarrass business. "His social relief program," he stated, "is good and need not cause any worry. You can expect one-half to one billion more money for retail spending this year due to federal government activities. Retail prices probably will be slightly higher."

"You can expect as much business in 1934, plus one billion dollars more."

Other predictions made by Guernsey included:

Passage of the 30-hour work week bill and its veto by the President. Will not be passed over veto.

Nothing in sight in way of inflation. Not as serious as sounds.

Taxes won't be increased this year. May look for substantial increase later, or after substantial recovery by business.

Soldier bonus sure to pass. Will be vetoed by President and not passed over veto. Final result will be some sort of compromise.

Many retail codes probably will be consolidated into one code. Important provision will be abolishing of "loss" leaders.

In concluding Guernsey explained the "Reservoir Concept," new system of accounting being utilized by some department stores. He said it was a great thing for electrical merchandising departments.

J. R. Poteat, manager of the range division of General Electric's specialty appliance sales department, presented G-E's line of electric ranges for 1935 which includes several new models.

Charles A. Wolcott of the Daniel Starch Organization, New York City, told of the three-year survey made by his organization investigating the visibility and readability of advertisements published in national magazines.

Ideas Count in Advertising

"It's the idea back of an advertisement that counts," he said, "and makes it possible for an ad to get a high degree of attention. The more people stopped by an advertisement the more that are apt to buy."

Wolcott displayed a number of national advertisements on which checks had been made. General Electric ads ranking high, both as to attention value and the number of people who read them.

The importance of good service was stressed by Arthur J. Pete of the Mercantile Stores, Inc. Pete, who is president of the Lion Store, Toledo, said electrical departments should have service departments that measure up to the stores' highest ideals.

"To insure greatest success," he said, "you should have good outside salesmen, specialty salesmen who are well paid. If you do not have efficient salesmen you are bound to lose business. We need sales managers more than buyers. Naturally creative salesmanship costs more money than selling done by people stationed back of the counter."

"I consider it essential that appliance departments have first-floor space and that manufacturers allow a definite amount of money to be spent for advertising, as the department sees fit."

Alfred Auerbach, editor of *Retailing*, New York City, the first speaker on Tuesday's program, said consid-

erable progress had been made toward greater understanding between manufacturers and department stores.

"Stores also are getting closer to the specialty selling point of view," he said, "but haven't aligned themselves to the extent they should. There is much irregularity among department stores in their merchandising tactics."

Fight the Dry Goods Complex

"The electrical department must fight the dry goods complex of store executives. Such a complex, I presume, is natural since department stores are the outgrowth of dry goods establishments and the taking on of home furnishings is comparatively recent."

"It is a hopeful sign, however, that key executives now are stirring themselves and taking a more sympathetic attitude toward electric appliance departments. In the near future they will give far more attention to the electrical department and do more outside selling."

"Department stores now are more inclined to get in on the ground floor when it comes to new commodities. It is possible that in the not-far-distant future department stores may sell pre-fabricated houses. Pre-fabricated houses undoubtedly soon will be placed on the market and at least some stores are seriously considering the situation."

"Department stores recognize they must expand activities that have not been pushed to any great extent up to this time, including electrical appliances. In three years, department stores have more than tripled their furniture business. I am convinced they will parallel the growth of the electrical appliance industry through their appliance merchandising activities."

"Stores could and should make far more dramatic display of electrical appliances."

"I believe stores have an opportunity to increase business by getting behind the FHA. It is pathetic to observe the inertia of the great majority of department stores toward the Federal Housing Administration activity."

Trained Salesmen Bring Success, Says Webb

Maurice Webb, manager of the G-E department of Strawbridge & Clothier, Philadelphia, told of the success of the department as operated on a re-sale basis. "The re-sale plan was inaugurated in March, 1933," he said, "and during the first year on a re-sale basis, we sold 10 times as many refrigerators as we sold in any previous 12-month period. Also we showed a 25 per cent increase in 1934 over 1933."

"There is no question but that the success of the department depends upon the caliber of salesmen we employ and its efficient supervision. All our salesmen are trained men. Twenty per cent of our business comes from trial installations. Once we get the refrigerator in the home the chances are it will be purchased."

Kitchen Should Be Nucleus

"I am thoroughly convinced that a General Electric kitchen should be the nucleus of any General Electric department. Many thousands have visited our electric kitchen and it sure helps to get business."

"We are now building a new and larger G-E kitchen on our fifth floor. It's surprising what a small investment it takes to construct an attractive and modern electric kitchen. We wouldn't think of being without one."

"You may be interested in knowing that electric refrigerators were sold to only 8 per cent of Philadelphia's 530,000 wired homes last year. There's no need to worry about saturation."

Julien Elfenbein, New York City, editor of *House Furnishings Review*, predicted that ultimately department stores will become the chief factor in the distribution of electrical appliances.

"A few years ago," said Elfenbein, "department stores were skeptical relative to merchandising appliances but that attitude rapidly is passing. Just as water seeks its own level, merchandise seeks the most efficient channel of distribution. The department store is the most efficient channel today for the distribution of appliances. Department stores were the really substantial merchants during the depression."

Ensembles' Become Important

"One word has revolutionized business in recent years, and that word is 'ensemble.' It came into great vogue in connection with women's clothes and now has percolated to the kitchen, with the result that tremendous fortunes undoubtedly are to be made in the distribution of electrical appliances."

"Electrical department heads, who combine specialty selling techniques with the many strategical advantages department stores have, should become invincible as merchandisers of appliances. And they should keep in mind that the best net profit is found in nationally advertised goods."

Nelson Wright, head of the electrical department at the May Co.,

Cleveland, said outside selling was essential for stores with light traffic and desirable even where traffic is heavy.

The May Co. operates its G-E department on a re-sale basis. Virtually all selling is done on the outside with only one good man being kept on the floor for closing sales.

Forces Utilities Tie-up

S. Einstein, controller and general merchandise manager for G. Fox & Co., Hartford, Conn., urged full cooperation on the part of department stores with their local utilities, predicting there would be much of such cooperation in the future. He discussed cost and accounting systems.

Merchandising methods and problems encountered in Java were discussed by C. H. Winner, general manager, merchandising department, Java division of the International General Electric Co.

"Many purchasers of electric refrigerators in Java place the machines on their front porches so that everyone can see how rich they are. Some don't even bother to connect them up. We frequently rent refrigerators for the summer, the immaculate Dutch housewife taking better care of the rented box than if she owned it."

"We have a year around temperature in Java of 85° so it's always open season for the sale of refrigerators. Service is a little bothersome at times, especially when an owner suddenly decides to move 900 miles or more which occasionally happens."

"But we give good service and keep our customers satisfied which accounts largely for our success. General Electric sells about 80 per cent of the electric refrigerators sold in Java."

Princess Kropotkin Speaks

Princess Alexandra Kropotkin, writer style authority and editor of the page "To the Ladies" in *Liberty* magazine, spoke on "What Constitutes Good Salesmanship." She said good humor and a lot of patience should be the chief characteristics of a salesman, coupled with a neighborly attitude.

"The perfect salesman," she said, "is one who knows when salesmanship ends and sales promotion begins." She is not an advocate of the idea that the customer is always right.

W. L. Stensgaard, head of the W. L. Stensgaard Associates, Inc., New York City, discussed the value of dramatic window displays. The Stensgaard window display service is used by numerous department stores.

Scaife Declares Public Can Be Taught to Buy

A. L. Scaife, newly appointed advertising and sales promotion manager of the specialty appliance sales department of General Electric, stressed the importance of proper training of appliance salesmen and intelligent use of the many sales tools available to electrical appliance merchandisers.

"People can be educated to want electrical appliances," he said, "and inducing people to buy what they want is what makes good business."

Emile Bacharach, Newark, formerly of Kresge's, told of the importance of handling quality products. "We still have a big job ahead of us," he said, "in making our top executives more appliance conscious. This clinic is a good example of the open-mindedness and interest shown by manufacturers in our merchandising problems."

Edward Goldstein of the May Co., Cleveland, was the speaker at the dinner tendered G-E's department store guests at Hotel Carter on Monday evening.

Amos Parish, New York City, well-known style and merchandising authority, was the last speaker on the program. His subject was "What's in Fashion in Selling Electrical Goods in 1935?"

"Fashions," he said, "are the things that people want. One of the most exciting fashions today is selling electrical goods. Methods that win business."

(Continued on Page 5, Column 1)

CURTIS REFRIGERATION

Commercial & domestic units. 1/6 h.p.—15 h.p.
Distributor franchises available. Write to:
CURTIS REFRIGERATING MACHINE CO.
Division of Curtis Manufacturing Company
1912 Kienlen Ave., St. Louis, Mo.

TEMPRITE Instantaneous Cooling

"The leading cooler for water, beer and other beverages"

Write for Catalog

Temprite Products Corporation
(Formerly Liquid Cooler Corporation)
1349 Milwaukee East :: Detroit

Artic
(DU PONT METHYL CHLORIDE)
IS A GOOD
REFRIGERANT

The R. & H. Chemicals Department
E. I. DU PONT DE NEMOURS & CO., INC.
Wilmington, Delaware
District Sales Offices: Baltimore, Boston, Charlotte, Chicago,
Cleveland, Kansas City, Newark, New York, Philadelphia,
Pittsburgh, San Francisco



Alfred Auerbach, editor of *Retailing*, New York City, the first speaker on Tuesday's program, said consid-

Retail Stores Appliance Selling Methods Outlined at G-E Clinic

(Continued from Page 4, Column 5) ness are the ones in fashion. Items that stores make money on are the ones in fashion. One who does things that are sound is in fashion.

"More electrical goods will be sold in 1935 than in any previous year. Last year you sold \$600,000,000 worth of electrical goods. That volume proves appliances are in fashion because people want them."

"Methods used in merchandising appliances vary, but there are sound fundamentals in selling electrical goods that should be adhered to if the greatest measure of success is to be attained."

"First—An appreciation of selling possibilities of electrical goods. The revenue derived per square foot of space occupied by electrical departments is far above the per square foot revenue of other departments.

"Second—Dramatic display. The way a department is laid out will have considerable bearing on its success or failure. It should be dramatized all the way. If the electrical department is treated like a stepchild it will act like a stepchild. Have a department that can be found without a flashlight."

Quality First Standard

"Third—Standard of goods. Quality always is the first necessity. Price is secondary. Your goods must have a good name on them. People want known goods. One of the best fashions is selling appliances that carry a good name coupled with quality."

"Fourth—Price. Trick prices are bad. If you will put the same fire and excitement behind selling goods at regular prices that you occasionally use in giving away merchandise you will find it more profitable. Bargains and trick prices are out of fashion."

Proper Training Essential

"Fifth—Sales training. Proper training of salesmen is an absolute essential."

"Sixth—Appearance of product. The customer not only buys convenience and economy but beauty. The looks of the product is highly important."

"Seventh—Advertising. All electrical appliance merchandising should be accompanied by good advertising."

"And finally, the wrapping up of the entire department in one good

selling string. The strength of the selling string is energy and willingness to expend in promoting what is sound."

Lutes Describes Methods Stores Must Adopt

"Are department stores ready to break down existing policies and barriers and fight for the great volume possibilities, or are they going to remain content to scratch over the surface in their efforts to obtain appliance volume?" asked Herschel Lutes, divisional merchandise manager of J. L. Hudson Co., Detroit, in a talk given before the General Electric Merchandising Clinic.

The biggest obstacle in the way of department store success in appliances, Mr. Lutes believes, is their failure to take cognizance of the methods that must be employed to get this business.

"Department stores cannot be lulled into a sense of security merely because they have enjoyed appreciable gains in appliance volume," he pointed out. "They still have far to go and the greatest possibilities are still to be realized."

Bulk of Business Outside

"The department store, with its traffic and ability to bring people into its store, loses sight of the fact because of its past experience in conventional items, that the bulk of the appliance business is still to be obtained in the home where the financial outlay and purchase can be discussed by husband and wife."

Across-the-counter sales in regular merchandise, on the average, comprise 75 per cent of most department store business, estimates Mr. Lutes, and he believes this is only a small part of what might be obtained on appliances.

"Even if department stores revolt in many instances at direct outside selling, policy should not stand in the way of intelligent and intensive follow-up of all prospects and users. Department stores have haphazardly done this fundamental job," he declared.

"The needs for supervision and intensive selling assistance is paramount. Department stores do not need buyers in appliances as much as they need sales managers."

Mr. Lutes believes that promotion is the need of the day and that every effort should be devoted to drumming up business. He is of the opinion that department stores generally, are feeling their way in the appliances, content to take the business that comes to them, but not to exert much effort to go out after it.

"Emphasis should be on how to get more appliance business—learn some of the many things the specialty operator has almost forgotten, because they are so fundamental," he advised.

"Department stores should spend less effort on discussions of principles in appliance merchandising such as mark-up, mark-down, control, advertising policies, credit terms, etc. and put forth every effort in getting business—both factors are important—but greater need is for large volume."

Must Try New Schemes

Department stores need liberalism in attitude toward the electrical business and its problems—a willingness to accept and try the schemes and plans of manufacturers, Mr. Lutes believes.

"Department stores should be open-minded to a fault—always receptive to schemes—why?—because they know so little about electrical selling generally and do not have sufficient knowledge to warrant saying 'No' without trying plans."

"Manufacturers must be considerate of department store policies," he declared. "They must ever strive to formulate plans that department stores can readily accept rather than build too elaborately a plan which will fail because of its exhaustive research on the subject."

"The industries and manufacturers must choose more carefully their lines and channels of distribution. They are prone to discourage department store promotion and success because of setting up too elaborate a competitive situation. Some electrical manufacturers are ever ready to consider and give thought to the competition they give department stores through their own direct selling efforts."

Sweitzer Sees Potential of 5 Billion in Appliances

Before the General Electric Merchandising Clinic last week at Nela Park, Channing E. Sweitzer, managing director of the National Retail Dry Goods Association, estimated that there is a five billion dollar potential retail volume, exclusive of air conditioning, in the electrical appliance field—if the homes of this country

reached the point of 25 per cent electrification.

At the present time, he pointed out, consumption of electricity in the average home is only 8 per cent of the potential consumption of a completely electrified home of average size.

"It is evident," he declared, "that this tremendous potential retail volume of five billion dollars could be realized, if the present use of electric current in American households were only tripled."

"This is an objective which is by no means unreasonable, if the producers and distributors of appliances, and the electric power companies adopt sound and intelligent methods to accomplish it."

"In seeking this objective the retailer must assume an important share of the responsibility. The logical outlet for the distribution of electrical appliances to the public is through established retail stores—whether they be department, furniture, hardware, or electrical appliance specialty shops."

"This is true," believes Mr. Sweitzer, "because the American people naturally turn to the retail store as the source of all their needs and wants. When a customer enters a retail store, she is in a buying mood and is a potential purchaser of merchandise which the store offers for sale."

Advertising Creates Want

"As a regular reader of retail advertising, the desire to acquire goods to fulfill her needs and wants is constantly stimulated; and her purchases are frequently influenced by effective displays, appropriate demonstrations, and good salesmanship, which should constitute part of the promotional program of every live-awake, efficiently operated retail store."

"The retail store," he declared, "is a more or less permanent institution in the community. For this reason the customer has come to have confidence in its policies, its merchandise, service, guarantees, adjustments, and credit terms—all factors to be considered by the average customer when the purchase of so important an article as a major electrical appliance is under consideration."

The retailer, if he is to play his part in developing a large consumer market for electrical appliances should either decide to undertake the distribution of appliances "in a manner worthy of so major a line of merchandise, or else stay out of the field entirely," in the opinion of Mr. Sweitzer.

"A line of merchandise which requires expert merchandising, skillful

promotion, good salesmanship, thorough servicing, and sound credit granting cannot be successfully handled by 'hit or miss' methods; and should not be handled by a merchant who plans to resort to such methods."

Potential of Community

"The retailer must acquaint himself with the potential needs of his community—particularly as to the potential demand for various items, and the best selling price lines which his customers will readily pay for them. In other words, he must know what his customers want, and be prepared to supply their needs."

"In the promotion of this department, and especially in the pioneering of new lines of appliances, he must be willing to spend more than his normal percentage for advertising and promotion, and therefore should be allowed a higher than normal mark-up on these lines. For educating consumers to the uses of new merchandise, and recruiting and training an efficient sales force and service department is bound to be an expensive operation."

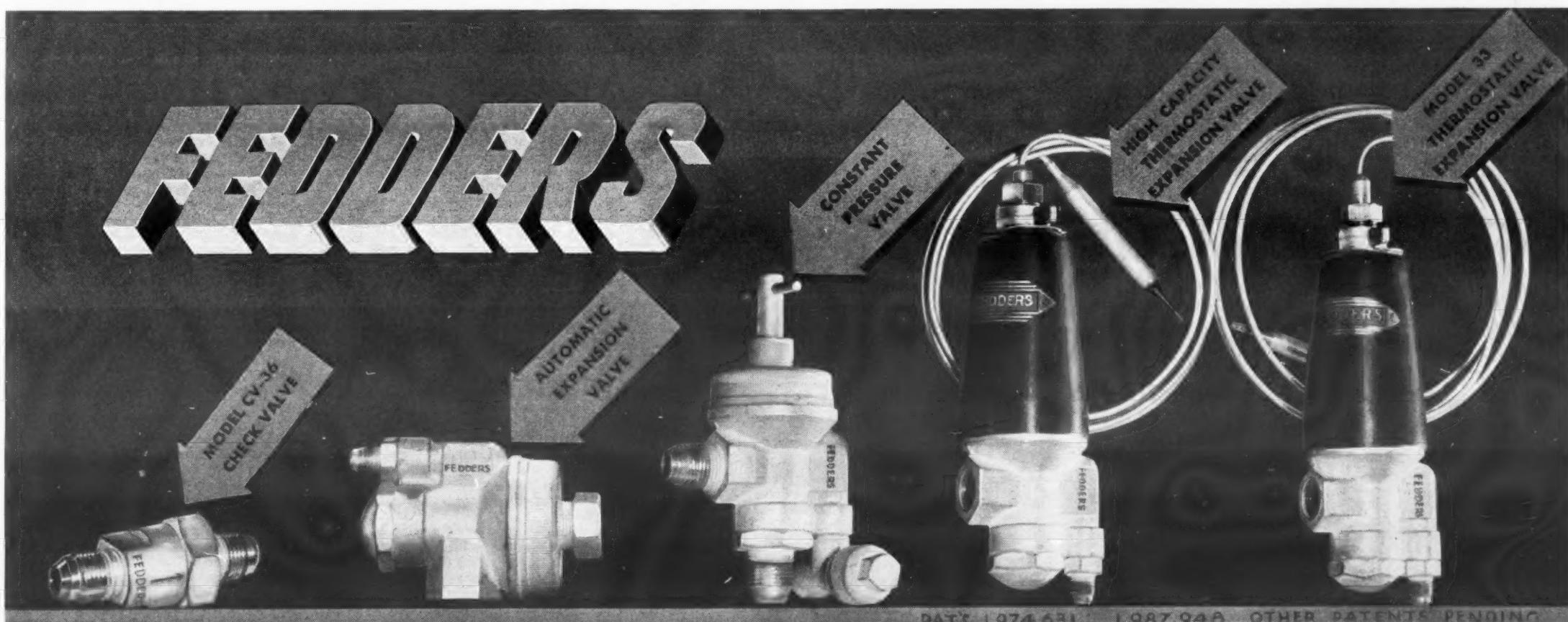
"However," he pointed out, "retailers cannot expect to obtain their rightful share of the great existing potential market of electrical appliances, unless they are willing to blaze the trail by enlightening their customers as to the uses, conveniences, labor saving, and healthful advantages which electrical appliances will bring to the modern household."

Knowledge Necessary

From a merchandising angle, Mr. Sweitzer warned, the retailer must know the sales possibilities of each appliance and price line; when is the best time to promote each appliance; how to coordinate their promotion with the sales of home furnishings and other lines in the store; how to get the most out of their interior and window displays; how to move slow-selling items; when to take markdowns; and what should be his rate of turnover to produce the best volume at a profit.

"The promotion of electrical appliances offers a real challenge to the best brains in retail advertising," he stated. "There is so much consumer education and pioneering to be done, that we, as retailers, can only hope to develop this vast consumer market through the medium of carefully planned and intelligently executed campaigns."

"In this connection, I do not think that the retailer can be expected to assume the entire burden. His promotional efforts should be supplemented by those of the manufacturer, jobber, (Continued on Page 6, Column 1)



MODEL CV-36 CHECK VALVE

Assures one-way refrigerant flow safeguarding performance of single and multiple systems. Write for Bulletin 90.

AUTOMATIC EXPANSION VALVE

Model 9940 provides accurate control on single systems. For all standard refrigerants except ammonia. Write for Bulletin 75.

CONSTANT PRESSURE VALVE

Maintains desired pressure in evaporator within a few ounces. Easily adjusted. Write for Bulletin 90.

HIGH CAPACITY THERMOSTATIC EXPANSION VALVE

Especially designed for use on Air Conditioning coils. Has 4 Tons capacity with Freon (F-12); 8½ Tons with Methyl Chloride.

MODEL 33 THERMOSTATIC EXPANSION VALVE

Provides accurate refrigerant control on single and multiple systems. Thousands giving satisfaction all over the world.

Are You Getting Your Copy of the FEDDER'S NEWS?

FEDDERS MANUFACTURING CO. BUFFALO, N.Y., U.S.A.

106 E. 19th St., New York — 603 W. Washington Blvd., Chicago — 303 E. 6th St., Cincinnati — 209 S. Pearl St., Dallas — 923 E. 3rd St., Los Angeles

Celebrities Seen and Heard at Merchandising Clinic in Cleveland—



(1, 2, 3 and 4) Princess Alexandra Kropotkin, whose regular page in Liberty Magazine is one of the three most readable "kolyums" in American publishing, tells the G-E Merchandising Clinic what she thinks of salesmen. (5) Syd Caswell, Detroit G-E distributor, thinks the winter air is good for baldness. (6) C. H. Winner, G-E representative in Java, amuses the clinic with tales of a foreign market. (7) W. L. Stensgaard tells the department store men at the clinic that showmanship will be the watchword in 1935.



(1) Jessica Meek, home service director of the J. L. Hudson Co., Detroit department store, isn't just so sure that she agrees with what she's hearing; but Ralph Cameron, G-E department store division manager, the back of whose head you see in (2 and 3) thinks it's great stuff. (4) Johnny Ecclestone of Buffalo registers. (5 and 6) Princess Alexandra Kropotkin—in two moods.

Sweitzer Depicts Promotion Plan For Large Retail Stores

(Continued from Page 5, Column 5)
and utility; and in turn the efforts of all should be carefully coordinated.

"Promoting appliances is an all-year-round job, and careful planning is needed. As every one knows, electric refrigerators sell better in the spring and summer months than they do in mid-winter; that many electrical appliances are much in demand during the Christmas season as gifts; that radios can be successfully promoted during the February and August furniture sales; that they all have their own particular promotional possibilities in the appliance field.

"In fact, there is not a month in the year during which electrical appliances do not lend themselves to

timely and aggressive promotion. Accordingly, manufacturers and retailers alike should cooperate in creating consumer demand through the proper coordination and timeliness of their sales promotion and advertising campaigns-linking the latter definitely with seasonal and other calendar events."

According to a survey conducted by the National Retail Dry Goods Association, newspaper advertising and store and window displays are the most important media in arousing customer attention and interest in these lines of merchandise. The average retail store with its advertising department and trained copywriters should have little trouble in

conducting effective newspaper campaigns, he stated.

Mr. Sweitzer believes that the average store is not making the most of its opportunities in displaying electrical goods. Good window displays of electrical appliances, which lend themselves to demonstration and mechanical operation are too infrequently used in stores.

Mechanical Motion

Nothing arrests the attention of passers-by along shopping thoroughfares more readily than mechanical motion used in connection with display. Electrical appliances are admirably adapted to this possibility, he pointed out.

The possibilities of setting up model electric kitchens, laundries, and heating plants within the department itself are limitless. In stores where this has been done under the supervision of trained salespeople and demonstrators, volume has been substantially increased due to the ensemble selling of two or more items needed to complete the electrification of the kitchen or laundry.

"I am fearful," he averred, "that far too few stores have made the most of direct-by-mail advertising in the promotion of their electrical appliance departments."

"With their opportunity to obtain up-to-date lists of prospective appliance customers, and particularly charge customers, this phase of advertising presents untold opportunities for sending a personal message right into homes, which will vividly portray the many uses and conveniences of appliances and the terms under which they may be purchased.

"Our retail stores should take a lesson from the effective work which has been done by the public utility companies in the use of direct-by-mail advertising in conjunction with the mailing of their monthly statements."

Honest Advertising

Mr. Sweitzer emphasized the fact that the advertising of electrical appliances must be honest and truthful, particularly in the appliance field, because it is made up of merchandise intended to be used not for a day, a week, or a month, but for years—and, he stated, "if the customer has fallen prey to false or misleading advertising claims concerning an electrical appliance purchase, her ill will toward the manufacturer and retailer will not be one of short duration."

An important problem is the development of an efficient sales organization, which should include a department manager, sales supervisor, demonstrators, and salespeople, declared Mr. Sweitzer.

"There are four fundamental factors which must be recognized in building up any personnel organization, and these are particularly essential in developing the personnel of this department. Briefly they are—careful selection, thorough training, adequate compensation, and proper supervision.

"The selection of the right department manager and sales supervisor is most important, because upon the caliber of these men depends the efficiency of the rest of the department's personnel. Good management

and intelligent sales direction can assure the success of the department; while poor management and indifferent sales supervision will certainly produce the opposite result."

Appliances require specialty salesmanship, he said. Demonstrators and salespeople must be of a different and higher type than those found in the ordinary department of the store.

Enthusiastic Sales Force

"They should be young men and women, full of enthusiasm, have perseverance, understand people, and be mechanically inclined. They must be carefully trained before being permitted to sell either in the department or in the home. There are perhaps few lines where it is more necessary for the sales person to know his merchandise, than in the case of electrical appliances.

"This knowledge should consist of adequate information on the use, performance, construction, and workmanship of every appliance which the sales person is expected to sell. This information instills confidence in the sales person or demonstrator; and we all know that the absence of confidence due to lack of merchandise information and the inability of the sales person to answer intelligently customers' questions or objections are factors responsible for a high percentage of lost sales.

Merchandise Training

"Assuming that the sales person has natural selling ability, I cannot emphasize too strongly the need for merchandise training in this department," Mr. Sweitzer said. "This training should be done by the department manager or sales supervisor with the assistance of training department representatives, if the store maintains such a department. Use should be made of the excellent educational material furnished by manufacturers for the purpose of training the salespeople of their distributors."

"If we employ a higher type of sales person in this department, and expect him to obtain satisfactory results," he declared, "then we must be willing to compensate him adequately."

"He should be offered a financial incentive to increase sales through the payment of a suitable bonus or commission, carefully set in relation to the conditions under which he works."

Compensate on Results

To compensate the salespeople of this department in line with their ability and sales results, Mr. Sweitzer believes is essential to maintain a stable permanent organization for successful operation.

"Good management and supervision on the floor in a retail store do not present a very serious problem; but once the sales person is outside of the store premises, he requires careful supervision, not only for the purpose of seeing that his efforts are along conscientious lines, but also that he does not intentionally or otherwise violate the rules and policies of the store in representing its goods or services to the customer."

"Retail stores are not only vendors of merchandise," said Mr. Sweitzer, "but are also primarily service institutions. Any retailer who hopes to obtain his full share of the electrical appliance business of his community, must establish a reputation for service, particularly in connection with the sale of major appliances. There is absolutely no reason why a retail store cannot maintain a service department, equipped to render prompt and thorough service to its electrical appliance customers."

Service Departments

"They now operate service departments in conjunction with their furniture, carpets and rugs, draperies and upholstery, awning and window shade departments—therefore, why not a department or bureau for the installation and servicing of appliances."

"Unless a retailer is willing to operate such a department for the convenience of his customers, he cannot expect their patronage. Their appliance purchases will be made from his competitors who are equipped to sell them not only merchandise, but the servicing which it needs."

"Most retail stores of the type which sell electrical appliances, offer credit facilities to their customers, and customers have long learned to have confidence in their financial dealings with such stores. Their credit departments must be willing to accept sound and reasonable credit business, and should exert themselves in attempting to secure such business."

Promote Instalment Sales

"Instalment sales of major appliances should be promoted aggressively, but only on a sound basis—with a fair down payment and a reasonable period of monthly payments, depending upon the type of appliance and the amount of its selling price."

"There should be no foolhardy competition in credit terms. Stores should compete on merchandise values and services, but not on credit terms to the extent that no down payment is required, and unduly long periods of time are permitted before the merchandise is paid for. To do this, demoralizes the credit business of an institution."

"In this connection," he declared, "I want to condemn vigorously the so-called winter selling plans which have recently been sponsored in financing the sale of electric refrigerators."

Winter Selling Plans

"I have no quarrel with manufacturers or jobbers who sponsor such plans, but I claim that they have no right to foist these plans, which are contrary to the sound principles of retail credit upon retailers or their customers. I have yet to find a retail credit manager who gives his approbation to the so-called winter selling plans."

"In fact, last December so many protests were received at our offices from retailers, credit managers, and credit bureaus, against this movement, that the credit management division of the National Retail Dry Goods

(Concluded on Page 7, Column 1)

WARNING! Accept NO SUBSTITUTE for the Genuine

(Liquid
Sulphur Dioxide)

Recognized, the world over, as a highly reliable refrigerant—as free from moisture and impurities as human skill can make it—every step in production under rigid technical control. Refrigerator Manufacturers and Service Men who standardize on EXTRA DRY ESOTOO, enhance their prestige and increase their profits. Free literature tells why. Mail coupon and we will send it. And remember: speedy deliveries are assured by stocks at 49 distributing points.



VIRGINIA SMELTING CO.
WEST NORFOLK, VIRGINIA

F. A. Eustis, Sec'y, Virginia Smelting Co., 131 State St., Boston, Mass.
Send me the literature I have checked. I am interested in receiving any additional literature on Electrical Refrigeration you may issue from time to time. ERN-2-6-35

Folder: Extra Dry ESOTOO (Liquid Sulphur Dioxide)
 Folder: V-METH-L (Virginia Methyl Chloride)
 Folder: Transferring from large to small cylinders
 Circular: Physical properties of various refrigerants

Name
Street & No.
City & State



Coordinated Effort Urged to Build Appliance Market

(Concluded from Page 6, Column 5)
Association went on record in condemnation of this uneconomic method of financing the sale of electric refrigerators, and nothing which has transpired in the meantime has caused us to change our position.

"Major electrical appliances, being capital household goods, can properly be sold on a credit basis; but they must be sold on a sound credit basis. I have said—salespeople must know their merchandise; I can say with equal truth, credit managers must know their customers."

"A five billion dollar potential retail volume—this is the market which challenges the electrical appliance industry. But it cannot be developed by the manufacturer, jobber, retailer, or utility company working alone. It can only be developed through the coordinated cooperation of producers, distributors, and electric power companies."

Responsible for Quality

"With the manufacturer," Mr. Sweitzer said, "lies the responsibility of turning out quality goods which meet the requirements of established safety standards. In the appliance field, perhaps more than in any other field, shoddy and poorly constructed merchandise cannot be tolerated. Such merchandise presents hazards to human life and property with which no manufacturer or distributor can afford to gamble, since their very reputation and good will are at stake."

"I advocate that manufacturers, distributors, and testing laboratories continue the work which has already been started in preparing suitable standards for performance and safety, until such standards have been devised for all electrical appliances manufactured for home use."

"We still find utility companies engaged in the retail distribution of appliances; and not charging to their retail operations all the expenses which properly should be charged."

Unfair Competition

"It is obvious that this practice presents a form of unfair competition to local retailers and dealers with which they are unable to compete, and which furthermore undermines their enthusiasm and efforts, thereby retarding, and even defeating the wide-spread distribution of appliances."

Mr. Sweitzer related details of several cases of this type.

"Such policies and methods are uneconomic, unsound, and demoralizing, and they are contrary to the best interests of the electrical appliance industry. Retailers and other dealers cannot meet such competition. Therefore, they cannot be expected to enter or continue with enthusiasm in the field of appliance distribution under these conditions."

"Manufacturers, retailers, and fair-minded utility companies," concluded Mr. Sweitzer, "must work together to rid the distribution of appliances of such tactics. It can be done through the cooperation and teamwork of all those who have the best interests of this industry at heart. You can count upon retailers doing their part, because they recognize the possibilities of this vast market; and all they ask, is that the 'sore spots' of competition which still exist be abolished."

Award-of-Merit Plaques

Award-of-merit plaques were presented the following department stores by G-E's R. C. Cameron in recognition of outstanding performances in merchandising electrical appliances during 1934:

May Co., Broadway Department Store, Strawbridge & Clothier, J. L. Hudson Co., W. C. Munn Co., Higbee Co., F. & R. Lazarus & Co., Smith-Bridgeman Co., A. Polksky Co., Meir & Frank Co., Hutzler Bros., Castner-Knott Dry Goods Co., S. H. George & Sons, Meyer Bros., Hecht Bros., Proffitt's Department Store, Stix, Baer & Fuller Co., Shepard Co., M. O'Neill Co., C. F. Hovey Co., Barker Bros., Gimbel Bros., Pittsburgh; Abraham & Straus, Inc., The White House, Dayton Co., H. & S. Pogue, Schmoller & Mueller, Kress Dry Goods Co.

Attendance at Merchandising Clinic

Attending the merchandising clinic were:

Jack Adams, L. S. Ayres & Co., Indianapolis; E. G. Albright, Pittsburgh Mercantile Co., Pittsburgh; Alfred Auerbach, Retailing, New York City; R. S. Ashley, National Electric Supply Co., Washington, D. C.; Harry D. Adams, Wilkes-Barre Dry Goods, Wilkes-Barre, Pa.

Emile Bacharach, Newark; R. T. Bard, Bard & Barger, Inc., Columbus, Ohio; Turner Barger, Bard & Barger, Inc., Cincinnati; A. C. Berg, Gimbel's, Pittsburgh; George Bogie, R. H. Muir & Co., East Orange, N. J.; Walter L. Boege, McAlpin Co., Cin-

cinnati; A. J. Bourbon, O'Neill & Co., Baltimore; C. A. Brown, L. M. Blumstein, New York City; H. C. Brown, J. Bacon & Son, Louisville; Chester A. Brown, L. M. Blumstein, New York City; John Bronis, *Retailing*, New York City; O. B. Bergerson, *Dry Goods Economist*, New York City; R. J. Brown, G. E. Supply Corp., Bridgeport, Conn.

A. C. Case, Palais Royale, Washington, D. C.; S. C. Caswell, Caswell, Inc., Detroit; Jas. Cuthbertson, Mutual Buying Syndicate, New York City; H. T. Coe, Gimbel's Philadelphia; A. G. Chaffer, General Electric Co., Pittsburgh.

Harry Davidson, Hecht Co., Washington, D. C.; A. Davidson, Boutell Bros., Inc., Minneapolis; A. I. Denburg, Kresge Dept. Store, Newark, N. J.; Charles B. Dulcan, Hecht Co., Washington, D. C.

John Ecclestone, Frank W. Wolf & Co., Buffalo; S. Einstein, G. Fox & Co., Hartford, Conn.; Julian Elfenbein, *House Furnishings Review*, New York City; Robert C. Euchenhofer, F. & R. Lazarus Co., Columbus, Ohio; W. L. Evans, Castner-Knott Dry Goods Co., Nashville, Tenn.

J. L. Fahey, Keystone Appliances, Harrisburg, Pa.; James Ferrier, Fries and Schuele, Cleveland; A. Fishgall, Meyers Bros., Paterson, N. J.; J. I. Flynn, Kaufmann Dept. Store, Pittsburgh; H. H. Fleer, Rudolph Wurlitzer Co., Cincinnati; Ben Fowler, E. W. Edwards Co., Buffalo.

L. A. Gilson, Electrical League, Cleveland; Edw. Goldstein, May Co., Cleveland; F. P. Gracey, J. B. White Co., Augusta, Ga.; Norman C. Green, Crowell Publishing Co., Chicago; Wright Griffin, Rex Cole, Inc., New York City; C. Grabb, Pittsburgh Mercantile Co., Pittsburgh; A. Grossman, W. L. Stensgaard Associates, Chicago; John Guernsey, *Retail Ledger*, Philadelphia; E. A. Grossman, Watkins Furniture Co., Cleveland.

J. A. Hall, Federal Housing Administration, Washington, D. C.; Robert Harkness, Crowell Publishing Co., Chicago; L. B. Haughey, Fair Store Co., Cincinnati; Julius Hertzberg, S. Kahn Sons Co., Washington, D. C.; R. C. Hilton, Mercantile Stores Co., New York City; C. L. Hobbs, R. Cooper, Jr., Chicago; Jack Hubbell, Simmons Co., New York City; Fred Harvey, General Electric Co., Cleveland; S. H. Hein, B. Gertz, Inc., Jamaica, N. Y.; H. O. Hope, H. & S. Pogue Co., Cincinnati.

Glen R. Jackson, Smith-Bridgeman Co., Flint, Mich.; R. E. Jarvis, Lansburgh & Bros., Washington, D. C.; R. T. Jarnagen, S. H. George & Sons, Knoxville, Tenn.; Harold Jockers, Mercantile Stores Co., New York City.

Frank Kahn, Hecht Bros., Baltimore; H. Knauf, W. W. Mertz Co., Torrington, Conn.; John Klenke, General Electric Contracts Corp., New York City; Princess Alexandra Kropotkin, New York City; James F. Knipe, *Electric Kitchen Times*, Cleveland.

Harold J. Lance, R. H. Macey Co., New York City; Robt. Lewis, General Electric Supply Corp., Cleveland; C. F. Longacre, L. L. Stearns & Co., Williamsport, Pa.; Chas. Luft, F. & R. Lazarus Co., Columbus, Ohio; Herschel Lutes, J. L. Hudson Co., Detroit; Dan Lunt, Jordan Marsh Co., Boston; T. L. Losby, N. S. Power Co., Minneapolis; J. H. Lamson, Sawyers, Worcester, Mass.; Chas. A. Lade, Schusters, Milwaukee; Theo. L. Losby, M. S. P. Co., Minneapolis.

J. Maeding, R. H. Macy & Co., New York City; Samuel Marks, Palais Royale, Washington, D. C.; A. L. Martin, Crowell Publishing Co., New York City; Howard Mateer, McGraw-Hill Publishing Co., New York City; George L. McCartin, Associated Merchandising Co., Assn., New York City; J. E. McConaughay, Joseph Horne Co., Pittsburgh; Jessica Meek, J. L. Hudson Co., Detroit; L. E. Moffatt, *Electrical Merchandising*, New York City; H. J. Morgenstern, Frank W. Wolf Co., Buffalo; G. E. Mattison, Sawyer's, Worcester, Mass.; Frances Martin, *Electric Kitchen Times*, Cleveland.

Otto W. Nelson, Philip H. Harrison Co., Newark, N. J.; H. N. Newbold, General Electric Co., Pittsburgh.

W. H. Ochiltree, Ochiltree Electric Co., Pittsburgh; G. M. O'Connell, Cavendish Trading Corp., New York City; J. B. Ogden, J. L. Hudson Co., Detroit; E. J. Opal, General Electric Co., New York City; Tom Olliffe, *House Furnishings Review*, Chicago.

Arthur J. Pete, Mercantile Stores, Inc., Toledo; A. E. Pierce, General Electric Co., Bridgeport, Conn.; D. W. Proffitt, Proffitt's Dept. Store, Maryville, Tenn.; M. E. Pipkin, Rex Cole, Inc., New York City; Willis Posey, Sears & Roebuck, Cleveland; R. Peters, Wurzburg & Co., Grand Rapids, Iowa.

A. J. Rickard, L. Bamberger & Co., Newark, N. J.; R. K. Robinson, Associated Dry Goods Corp., New York City; R. C. Rolfsing, Rudolph Wurlitzer Co., Cincinnati.

Harry Schram, Straus & Schram, Chicago; Earl C. Schuele, Fries &

Pennsylvania Supreme Court Decides on Time Sales

HARRISBURG, Pa.—A recent decision by the Pennsylvania Supreme Court, which affects businesses selling on deferred-payment plans, is one which holds that if equipment is installed in premises against which there is a mortgage, even though the conditional vendor has complied with the provisions of the Conditional Sales Act, nevertheless, upon foreclosure, the mortgagee takes possession of the equipment.

The decision is said to void the Conditional Sales Act of 1925 relative to machinery, equipment, and fixtures.

Says the Court:

"Our holding as we do now can work no hardship on conditional sellers. Before they make delivery of their property to a purchaser whose plant is bound by a mortgage, all they need to do to protect themselves is to get the assent of the mortgagor to the removal of the articles in the event of default by the purchaser in his payments."

Some manufacturers whose products are retailed on deferred-payment plans have prepared a form on "waiver of lien" rights to be used in such cases.

Carson to Head Graybar Kelvinator Sales

NEW YORK CITY—Fred G. Carson, formerly vice president of the Central Radio Corp., has been appointed manager of the Kelvinator refrigeration division of the Graybar Electric Co., which is distributing the Kelvinator line through a number of its branches.

Westinghouse Sends 4 Crews into Field

MANSFIELD—Four crews of refrigeration executives and specialists from the Westinghouse Electric & Mfg. Co. this month will complete a 75-city tour in which they are presenting 1935 plans to dealers.

Crew leaders are P. Y. Daneley, manager of refrigeration department; R. C. Cosgrove, manager household refrigeration sales; V. E. Vining, department store supervisor; and C. H. Moran, household refrigeration sales.

Meetings planned for February are: Stockton, Calif., Feb. 1; Sacramento, Feb. 5; Reno, Feb. 8; Salt Lake City, Feb. 11; Boise, Feb. 14; Portland, Feb. 18; Seattle, Feb. 20; and Spokane, Feb. 22.

St. Louis, Feb. 1; Indianapolis, Feb. 4; Peoria, Feb. 6; Chicago, Feb. 8; Milwaukee, Feb. 11; St. Paul, Feb. 13; Sioux City, Feb. 15; Omaha, Feb. 18; and Des Moines, Feb. 20.

Baltimore (Cons. Gas), Feb. 4; Baltimore (Wesco), Feb. 5; Washington, Feb. 6; Richmond, Feb. 8; Philadelphia, Feb. 11; and Scranton, Feb. 13.

Detroit, Feb. 1; Grand Rapids, Feb. 4; Columbus (at Mansfield), Feb. 6; Cleveland (at Mansfield), Feb. 7; Toledo (at Mansfield), Feb. 8; at Pittsburgh, (Danforth Co.), Feb. 11; Pittsburgh, (Iron City), Feb. 12; Youngstown, Feb. 13; Akron and Canton, Feb. 14; Erie, Feb. 15; New Haven, Feb. 18; Springfield, Feb. 19; and Boston, Feb. 21.

Brazier Made Chairman Of Colorado League

DENVER—E. E. Brazier, manager of the Denver office of the General Electric Supply Corp., was elected president of the Electrical League of Colorado.



There is a Delco motor for practically every household appliance—refrigerators, washing machines, ironers, oil burners, and air conditioners. Each motor is especially suited to the job for which it was designed. All of them are manufactured with care and precision in workmanship—and all possess the rugged construction which, for years, has been the basis of Delco's dependable per-

formance and all-round reliability. As the use of electric appliances widens into new fields—as new inventions are devised to lift an even greater share of household drudgery from the shoulders of appreciative housewives and husbands—Delco will be ready. Delco will produce motors specifically designed to do the new work as efficiently and dependably as in the present.

DELCO PRODUCTS CORPORATION, DAYTON, OHIO

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Refrigerator Prices Go Up—and Down

TWO interesting cross-currents may be discerned in the household electric refrigerator price situation this year. Prices are being pushed up from the bottom—and down from the top. In other words, retail price schedules are being squeezed together.

Ever since the depression began in earnest manufacturers of household electric refrigerators have found it necessary—or deemed it advisable, at least—to have a price leader in their lines. So they have stripped a 4-cu. ft. box of all possible gadgets and convenience features, shaved discounts to what they considered an almost irreducible minimum, and even taken a loss themselves on these boxes. It was thus that the \$99.50 price has been obtained.

In order to make up for the losses of manufacturer, distributor, and dealer on these price leader models, it became necessary to step up prices of the larger models. Hence dealers frequently found themselves in the rather embarrassing position of having to try to explain why it should cost \$30 or \$35 more to obtain one additional cubic foot of refrigeration.

To really discerning buyers, the price spread between the smallest refrigerator and other models in the line has seemed unjustifiable, if not slightly ridiculous.

Naturally the industry did not get itself into a situation without due cause. In fact, there were several causes. First of all, of course, was the advertising value—the pull-'em-into-the-store potentialities—of the low price. Second was competition from private brands and "jillipies."

Egged on by the department stores, both reputable and "fly-by-night" manufacturers began making stripped-down refrigerators, eliminating the jobber by selling direct, and obtaining \$100-and-less retail prices.

The old-line manufacturers felt they had to meet this competition. They did. Result one: The "jillipies," and "fly-by-nights" were eliminated from consideration in the industry. Result two: the industry found itself with the sometimes embarrassing price discrepancy referred to in the forepart of this editorial.

Result three might have been predicted in advance—and was, by a few old heads—but it certainly wasn't welcome. It was the mighty rush to buy the price leaders. Old John Q. Public, a smarter fellow than many sales planners and policy directors give him credit for being, figured out what the score was, and played the game accordingly.

Hence, manufacturers found to their chagrin that they were selling close to a third of their total output at a loss. The same situation obtained in the case of distributors and dealers. So this year manufacturers have decided to do something to correct that situation.

Prospects for household electric refrigerators this year are discovering that the rock-bottom prices quoted them are no lower than \$119.50, if that low. More than that, they are seeing an orderly and graduated price schedule, in

which the difference between the cost of 4, 5, and 6 cu. ft. boxes seems reasonable and logical.

As has been the case in previous price movements within the industry, outside competition has been partly responsible for the revised theory of pricing in vogue this season. This time the "outside" competition is not a group of small opportunists. Rather, it consists of two of the mightiest concerns in merchandising today—Sears Roebuck and Montgomery Ward.

All during 1934 Sears Roebuck based its appeal on popularly priced 5 and 6 cu. ft. models. On these boxes they far undersold the market. This year they have planned to repeat this successful operation. Montgomery Ward has similar intentions. And so current 1935 price lists of the "old line" manufacturers were no doubt made up with this "mail order" competition (it is really "chain department store" rather than "mail order" competition) in mind.

But however it all came about, the industry should congratulate itself on its progress toward a sane price schedule. Not only will the results show up in profit statements at the end of the year, but financiers and others who watch the industry with more than a spectator's interest will find in this movement good evidence that the refrigeration industry is attaining maturity and stability.

WHAT OTHERS SAY

Self-Regulation Under U. S. Auspices?

In our opinion the most important change affecting advertising which has been made in the Copeland bill, S. 5, introduced in the Senate at the opening of the seventy-fourth Congress by Senator Royal S. Copeland, as compared with his bill at the last session, is the provision for self-regulation.

Self-regulation may seem to be inconsistent with government regulation, and the provision making it possible under the Copeland bill may mean much or nothing, dependent on what advertising interests do and on the policy of the Secretary of Agriculture. Here is the provision, taken from Sec. 704, providing "Advisory Committees from Industries":

"For the purpose of consultation in formulating general administrative policies for the enforcement of this act, the secretary is authorized to appoint an advisory committee from each of the following groups: The food industry, the drug industry, the cosmetic industry, disseminators of advertising, the public."

"To aid in securing compliance with the requirements of this act, the secretary is further authorized to accept plans for such self-regulation of advertising practices as tend to effectuate the purposes of this act, when presented by associations or groups representative of their industries:

"Provided, that nothing in this paragraph shall be construed as restricting the responsibilities and powers conferred upon the secretary by this act, and no plans shall be accepted which are designed to promote monopolies or eliminate or oppress legitimate enterprise."

The plan for self-regulation through "disseminators of advertising," meaning publishers and other medium owners, is based on the same idea which *Advertising Age* has emphasized for many months, namely, exercising control over objectionable advertising before it reaches the public. Furthermore, the provision for action by associations or groups is also in line with the recommendations of this publication, since it has already been demonstrated that individual action is not sufficient to determine the practices of mediums as a whole.

The provision for self-regulation does not require the secretary to accept any particular plan, of course, since he could not reasonably be expected to commit himself in advance to any such program. On the other hand, Secretary Wallace conferred recently with the board of the Advertising Federation of America at its meeting in Washington, following which the board adopted resolutions supporting the passage of the Copeland bill. This action, it seems to us, could hardly have been taken by the Federation if Secretary Wallace had not given strong assurances of his desire to have the industry set up its own program of self-regulation and of his willingness to accept a plan which really promises that.

It may be that action under government auspices is the only way to bring about effective self-regulation. Although opinion in the advertising and publishing field has been in agreement for some time on the necessity of providing machinery for each publishing group through which to pass on objectionable advertising, nothing has been done. With months in which to organize, not a single group has come forward with a workable plan, or indeed with a plan of any kind, thus convincing many that only under necessity imposed by law will the industry move effectively in the direction of self-regulation.

The A.F.A. has gone on record in favor of self-regulation, and has urged action by the associations and groups of publishers and other mediums, and we are confident that in view of its announced policy on this subject, it would not have agreed to support the Copeland bill unless it had been given assurances that genuine self-regulation would be permitted. If this opens the way to action by the "disseminators of advertising," and if they take advantage of the opportunity to govern themselves, under the Copeland bill, through specific regulations and methods which will not only carry out the general provisions of the bill but will put all advertising in order, then it may well be that enactment of the bill into law will represent opportunity for progress which cannot be made without legislative action.—*Advertising Age*.

LETTERS

Grunow's Loan

General Household Utilities Co.
Chicago

Editor:

Mr. Grunow has called my attention to your issue of Jan. 23, page 14, in which you make the statement:

"Assurance that the General Household Utilities Co. would continue its present operations and perhaps extend itself some came with the granting of a substantial Federal Reserve loan to the company."

We feel that this is, more or less, an unintentional reflection on the stability of the company or let's put it another way—that it would give the wrong impression to the average reader—the inference being that had we not received this loan, it might have been curtains.

Please do not in any way take this as a picky criticism or a super sensitive attitude on our part, but due to the comparative newness of this company in the field and the fact that we have a very spectacular type of advertising campaign in effect we are targets for vicious attacks from many sources and regrettably the least inference of instability of any kind has been turned against us in no very gentle terms.

Therefore, I am wondering if you cannot, in your personalities section write a script to the effect that the General Household Utilities Co. while receiving a Federal loan for the purpose of adequately improving its working capital position—nevertheless, has been backed all through its history by sufficient interested parties and sufficient available capital to insure its continuous operations, regardless of financial assistance from outside sources.

DUANE WANAMAKER,
Advertising Director.

Likes Rudio's Methods

Refrigerating Machinery Association
Southern Building, Washington, D. C.

Editor:

In the Jan. 23 issue of ELECTRIC REFRIGERATION NEWS, there was a very good report of the sales methods used by H. M. Rudio of Kansas City in distributing air-conditioning equipment. We should like very much to quote from that report in a bulletin going out to our members next week and trust you will have no objection to our using this material.

Of course, in quoting from this article, we will state that it was taken from ELECTRIC REFRIGERATION NEWS.

May I take this opportunity to say how very interesting and useful I find ELECTRIC REFRIGERATION NEWS and to congratulate you on your attractive and well-written publication.

WILLIAM B. HENDERSON,
Executive Vice President.

'Free Refrigeration' (Cont.)

Dry-Zero Corporation
Merchandise Mart
Chicago, Ill.

Editor:

I got a real kick out of Mr. Frankel's reply to my analysis of his "three months free refrigeration." Particularly the remark that my figures were "purely hypothetical."

Does Mr. Frankel know that if one of his salesmen urged him to build a 6 cubic foot (net) cabinet with inside width of 36 inches and inside depth of 18 inches, and he took his pencil and figured, that it would give him an inside height of approximately 18 inches—that his figures would be purely hypothetical? They would be based on the hypothesis of dimensions given him and on the established fact that the three dimensions multiplied together give him the cubic contents.

His conclusion would be absolutely reliable but his figures would be "purely hypothetical" of necessity. So it is with my figures on the savings obtainable from an inner refrigerator door. In fact, I might make Mr. Frankel a little bet on the side that savings from his double door are far closer to the four per cent reckoned from the results of certain experience tests of ours than to his advertised 25 per cent.

I am sorry Mr. Frankel that I was some kin to that old moss-back who said, when he saw the Wrights in the air, "I don't believe it." Mr. Frankel could not know, of course, that inner doors were old stuff to us. Long ago, we did a lot of work on that particular subject in the ice cream body, dry-ice transport, and similar fields, studying that savings obtainable with curtains or light self-closing doors to reduce heat entry when insulated doors were left open during service.

Neither, apparently, is Mr. Frankel aware of the volume of practical test work done on the relationship between thermal loss and current consumption. If he were, perhaps he might have hesitated to tell me all about it.

In view of this I extend to him and his engineers a hearty welcome to the

Dry-Zero Laboratory. Here in an hour they can see much of such matters as insulation, starting torque, cycle frequency, and other factors—more than he evidently believes could be guessed at in a year.

With this invitation I shall let the matter rest, except for one more thing that should be straightened out for the sake of the record. This is his intimation that, as an insulation manufacturer, I am hostile to his double door because it releases him from "depending solely upon efficiency of insulation and tightness of door gaskets to reduce thermal losses."

This is misleading. The more efficiently insulated a cabinet is the less heat will enter through the walls and if heat entry through the walls is decreased, the percentage of the loss through door openings in relation to the total loss will be increased—making possible larger savings with Mr. Frankel's double door. Consequently, to make the savings from his door more attractive than the present actuality, Mr. Frankel should use the greatest practical thickness of the highest efficiency insulation.

HARVEY B. LINDSAY,
President.

Correspondence for Ted

General Electric Co.
General Electric Bldg.
New York, N. Y.

Dear Mr. Quinn:

Having just returned from a sojourn in the South, I am late in discovering that you are now associated with the ELECTRIC REFRIGERATION NEWS, and that there are two of us in the industry. My natural impulse is to extend sympathy, not because of the work we have to do, but because of our common tag. The plain truth, however, is that it isn't a bad sounding name and is easily expressed, as you have undoubtedly discovered. Hereafter when mistakes are associated with the name I shall have some one else to blame. This is a fair warning. You and I at least may continue to believe that a rose by any other name is not a rose.

I look forward to meeting you and learning by an interchange of inquiries just how it all happened. In the meantime, may I wish you the best of luck and say also that you are associated with an attractive and progressive group of human beings.

T. K. QUINN,
Vice President.

M. Glen Miller
8 S. Michigan Ave., Chicago

Mr. Ted Quinn:

Now that it is too late for you to renege on our Dry-Zero ad in last week's issue of the NEWS, we want to apologize for taking advantage of you and hope you will accept our published banter in the light intended.

Seriously, we do want you to know about Dry-Zero and the company is sincere in inviting you to see their laboratory at any time. Mr. Lindsay will personally be glad to meet you, as will we all here.

We suspect that someone dragged you out into the snow to have your picture taken, and thanks for that courtesy.

Can it be that that necktie is yellow with red spots?

M. GLEN MILLER.

The Real 'Front Page'

Keystone Appliances, Inc.
928 N. Third St., Harrisburg, Pa.

Editor:

I would not sleep tonight if I did not take this opportunity to tell you that your column of Personalities is "the front page" of the paper as far as I am concerned. I thoroughly enjoy it, as I know thousands of other men in the industry do.

W. C. JONES,
Mgr., Sales Promotion Div.

An Orchid Is Enroute

Grand Rapids Brass Co.
66-90 Scribner Ave. N. W.
Grand Rapids, Mich.

Editor:

We wish to inform you that your weekly paper, ELECTRIC REFRIGERATION NEWS, is a constant source of information to us in the electric refrigeration field.

I am sending an orchid to you for your continually fine editorials and interesting camera shots.

I hope that the year 1935 will bring even greater success to those in the field of electric refrigeration.

J. L. MURRAY, JR.,
Sales Department.

'Service Kinks'

H. E. Humphreys
Manufacturers' Agent
Concord, N. H.

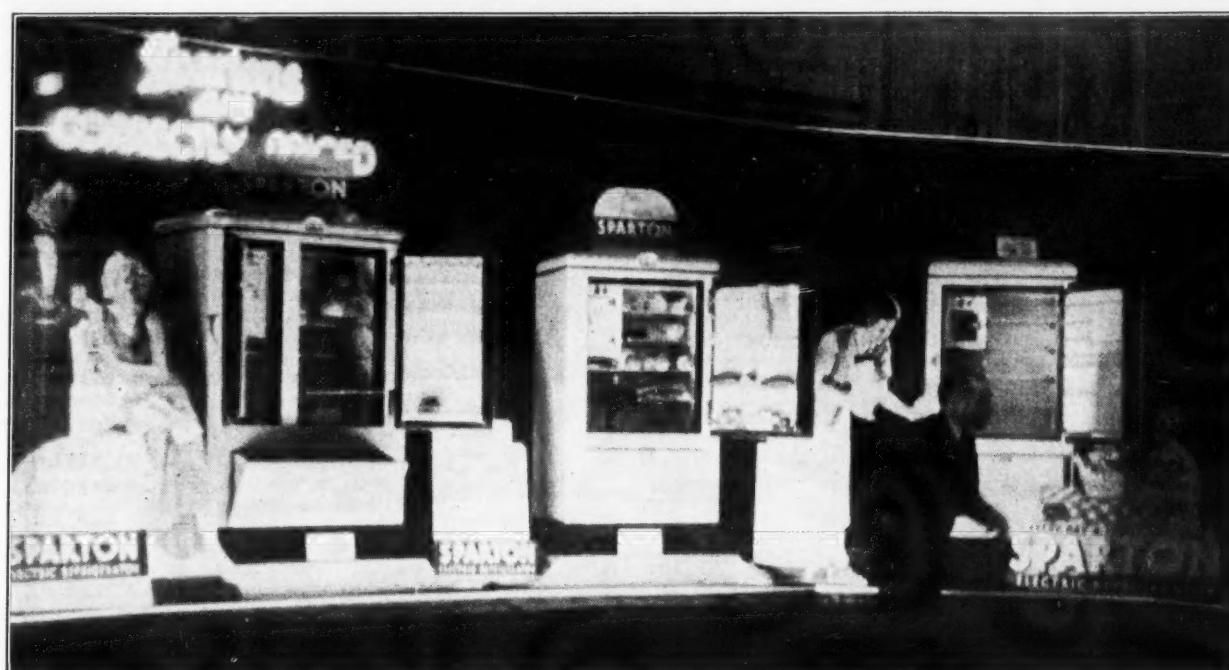
Editor:

I have found your 1934 DIRECTORY a valued source of information, and look forward to the 1935 numbers. The Master Service Manual will fill a long standing need.

Would suggest that a column on "Service Kinks" in the NEWS would be an acceptable addition. It might be of particular interest to new service men and an Idea Swapping Medium for the Old-Timers.

H. E. HUMPHREYS.

Unveiling New Sparton Line



This candid camera photograph taken in a darkened auditorium shows the 1935 line of Sparton refrigerators as it was presented to Sparks-Withington distributors at their recent convention in Jackson, Mich.

F-M Advertising Is Outlined at Meeting

DETROIT—Fairbanks-Morse dealers, prospective dealers, and sales representatives from all over Michigan had their first look at the 1935 line of F-M Conservador electric refrigerators in the Colonial Room of Detroit-Leland hotel last Tuesday night. Host to the better-than-300 crowd was President A. H. Zimmerman of Republic Supply Corp. of Detroit, Michigan distributor.

Addison Brown, sales manager of Fairbanks-Morse Home Appliances, Inc., presented the 1935 F-M line. Stressing "the company behind the product," he went into the 104-year business history of the company, with its record of 35 years of association with the average dealer.

Fairbanks-Morse this year is offering its dealers an exclusive franchise and a balanced program of year-around business, with electric washing machines, ironers, and radios supplementing its line of electric refrigerators. The company also expects to have a line of air-conditioning equipment available for distribution through dealers before the year is out.

Fairbanks-Morse is asking, Mr. Brown said, that dealers concentrate on electric refrigerator sales only from March to June. After that, they can raise their year-round income through the sale of other F-M appliances.

Beauty and utility are the twin themes of F-M sales promotion and advertising this year. Taking a leaf from the motor manufacturers' book, the company is stressing eye appeal, the convenience feature of the Conservador, economy, and quiet operation.

The Fairbanks-Morse 1935 advertising program, as outlined by Advertising Manager William Watt, will include full-page displays in *The Saturday Evening Post* and other national magazines. In addition, a campaign of local newspaper advertising, soon to be launched, will carry the F-M sales story into every dealer's home territory.

Direct-mail pieces will feature the economy, convenience, and greater food space of the units, and dealers will receive window displays, posters, pamphlets, recipe books, and "Can You Tell Me?" a booklet of household hints and general information.

Present at the meeting, in addition to Salesmanager Brown and Advertising Manager Watt, were the following Fairbanks-Morse officials: Henry Bear, assistant sales manager; Ernest Hay, manager of the company's Detroit branch office; and Harry Glassman, field engineer.

Republic Supply Corp. representatives included M. B. Goble, sales manager; A. L. Atwood, E. L. Milligan, M. E. Harper, Leo Dagnias, Kenneth Zimmerman, and Gordon F. Spoor.

Oklahoma Dealers Hear Norge 1935 Plans

OKLAHOMA CITY—Three hundred dealers and salesmen attended the Norge dealer meeting held by Brown Electric Co., Norge distributor for Oklahoma and the Panhandle area of Texas, at the Shrine auditorium here recently.

Speakers on the program included James A. Sterling, sales promotion manager, Norge Corp.; W. E. Densmore, national territory supervisor, Norge Corp.; Gerald Stedman and Al Hanson, both of Cramer-Krasselt Co.; and H. A. Barnard, manager of Brown Electric Co.

Dealers viewed the 1935 line of Norge products and the production, "The Freedom of the Shes."

Williams Reports on Results of Burner Rental Plan

BLOOMINGTON, Ill.—People need only to be "shocked into action" to buy merchandise today, believes C. U. Williams, president of the Williams Oil-O-Matic Heating Corp., after seeing results obtained from the "trial offer" advertisements run in the *Chicago Sunday Tribune* and the *Chicago Evening American* recently.

"At first glance," states Mr. Williams, "the basic appeal in our offer seems to be the trial and three years to pay. Yet the first sales made in Chicago were cash sales. In other words, those purchasers had been holding off until they found an excuse to buy. Our advertising was just the impetus needed to make them act."

"This bears out a theory that I have held all along," says Mr. Williams. "That is, the public is just emerging from a period in which every buying instinct has been suppressed. People will buy now if you have a product that meets certain of their needs and if you go at least half way in making its purchase possible."

Mr. Williams believes the trial offer is a strong sales appeal, but must be backed up by personal presentation by trained men. The merchandising set-up in Chicago is described by him as follows:

"The city has been divided into eight districts. In charge of these eight districts are eight district sales managers. Districts, in turn, are divided into sales territories, each representing the sales potentialities of a city of 50,000 population. Seventy trained salesmen are already operating in these territories. This force will be enlarged as the plan hits full stride."

Sparton Resumes Radio Program Feb. 10

JACKSON, Mich.—Sparton returns to the air Sunday, Feb. 10, with an enlarged program, the time being extended to a half-hour broadcast starting at 4 p. m. each Sunday.

Jolly Coburn and his orchestra, who play every night in the world's highest dining and dancing rendezvous, the Rainbow Room on the 65th floor of Radio City, will again be featured in the Sunday programs.

In addition to the Triolianians and a group of specialty artists, the new broadcast will feature the Sparton Embassy choir. Again, Alois Havrilla will be on the job as announcer, along with Casper Reardon, symphonic harpist.

Programs will go over the NBC Blue network once more, but Sparton has extended its group stations to include sections of the United States heretofore not contacted.

N. Y. City Service Men Will Meet Feb. 8

NEW YORK CITY—Master Refrigeration Association, Inc., will hold an open meeting for refrigeration service organizations and members of the association at the Park Crescent hotel here Feb. 8.

Rochester Norge Corp. Is Incorporated

ROCHESTER, N. Y.—The Rochester Norge Corp., Inc., has filed articles of incorporation through its attorney, Bernard Cowen, Buffalo, N. Y.

Kelvinator Schedules Large Outdoor Campaign

DETROIT—In addition to advertisements in magazines, newspapers and trade publications, Kelvinator Corp. has scheduled an outdoor advertising campaign on an enlarged scale to be conducted on a cooperative basis this year with distributors and dealers.

Four types of posters available are similar in layout. Use of color is concentrated in the refrigerators' contours.

Refrigerators are displayed on a solid black background broken only by the name "Kelvinator," and a circle enclosing the words, "19 models." A panel, separated from the remainder of the board by a red line, carries the dealer's name.

The "four refrigerators in one" theme is being repeated this year by Kelvinator. In a typical magazine illustration scheduled to appear in the March issue of *Good Housekeeping*, are figures of a man and a woman inspecting a new refrigerator model. Under the caption, "When You Said, 'I Have Four Refrigerators,' I Thought You Were Joking," the copy reads in part: "She wasn't joking—no, sir! She does have four refrigerators. . . . And you need four if you are to get all the advantages, conveniences, and economies electric refrigerators offers."

Kelvinator advertising continues to offer customers the option of purchasing on the Refrigeration Discount Co.'s ReDisCo monthly budget plan for time payments.

National magazines which Kelvinator will employ this year include: *The American Weekly*, *Collier's*, *Good Housekeeping*, *Liberty*, *McCall's*, and *The Saturday Evening Post*.

Jack Pearl & Rich to Be on Frigidaire Broadcast

NEW YORK CITY—When Jack Pearl steps to the microphone on Feb. 13 for his return to the air in the new role of Peter Pfeiffer, his cousin Freddie Rich, will be on the podium as musical director. The programs, to be presented over a nationwide Columbia network by Frigidaire Corp., will be heard from 10 to 10:30 p. m., EST, every Wednesday.

By an odd coincidence of programming, the featured comic and the maestro of the series are first cousins. Their mothers were sisters, and Freddie and Jack were brought up in the same neighborhood in New York City. They were playmates in their boyhood, but since that time they have followed separate paths to fame and have never before worked together professionally.

In addition to conducting his 30-piece orchestra in his own dance arrangements, Freddie will have a regular speaking part in the program.

The musical selections will be presented not as interludes to the script material but as integral parts of its episodic action. A 12-voiced mixed chorus under the direction of Leith Stevens, young CBS vocal arranger and coach, will be heard with the orchestra.

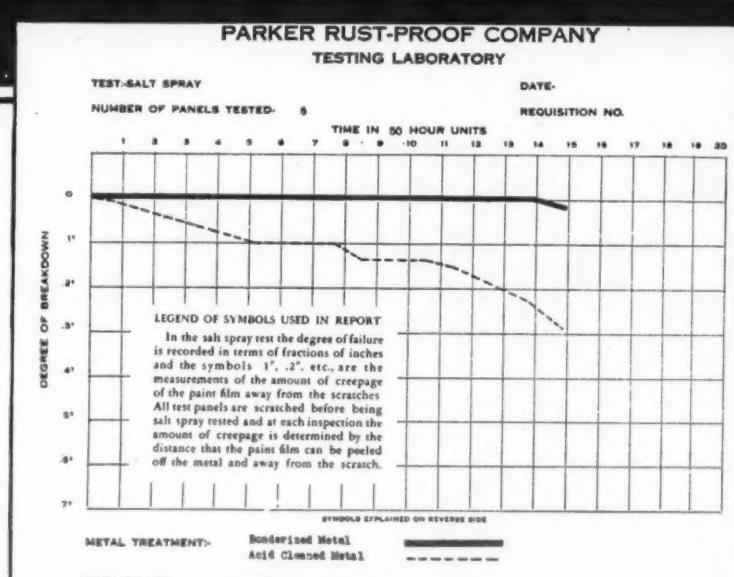
New Baltimore Shop Carries Westinghouse Line

BALTIMORE—Westinghouse refrigerators and appliances are retailed at the electrical shop recently opened in Centreville, Md., by Alfred M. Green, former proprietor of a dry goods business in that city.

BONDERIZING..

TESTED in the LABORATORY

PROVEN in the KITCHEN



These two panels, both carrying typical refrigerator finish, only differ in that one was Bonderized and the other was finished over bare metal. Both were then scratched to break the finish and were given the salt spray test—a standard laboratory test of finish durability. The chart visualizes the much greater durability of finish over Bonderizing.

YEARS of satisfactory service in thousands of kitchens is proving the accuracy of scientific laboratory tests on the efficiency of Bonderizing.

Both tests fully demonstrate the value of Bonderizing as a rust preventive base for enamel finishes. It not only furnishes a foothold for the finish, but it also prevents the formation of dirty, rusty scars, should the finish become damaged or broken.

PARKER RUST-PROOF COMPANY • 2197 EAST MILWAUKEE AVENUE • DETROIT, MICHIGAN



Send for free book,
"Rust Prevention for
Refrigerator Finishes."
Get additional facts
on the value of Bond-
erizing.

PARKER
RUST-PROOFING
processes
BONDERIZING • PARKERIZING

Table 1—Summary of Air Conditioning Installations in Chicago

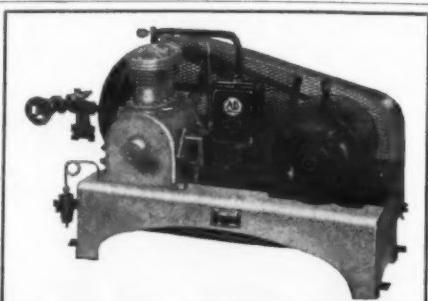
	Prior 1933		1933		1934		Total	
	No. Jobs	Hp.	No. Jobs	Hp.	No. Jobs	Hp.	No. Jobs	Hp.
Banks	4	1,006	1	200	3	46½	8	1,252½
Brokers & Exchanges	4	694½	2	26½	2	41	8	762
Beauty Shops	1	4½	0	0	4	63½	5	67½
Churches	1	90	1	5	1	65	3	160
Civic Buildings	0	0	1	116½	0	0	1	116½
Clubs	3	357	1	2	0	0	4	259
Dance Halls	4	465	0	0	0	0	4	465
Dentists	0	0	2	1½	2	2	4	3½
Drug Companies	2	56	0	0	6	113½	8	169½
Hospitals	2	33	0	0	5	8½	7	41½
Hotels	13	3,187½	3	94½	6	124	22	3,406
Industrial								1,705½
Bakery	18	303	0	0	0	0	18	303
Candy	17	2,471	3	203	4	381	24	3,055
Printing	13	1,800½	1	201½	5	98½	19	2,100
Miscellaneous	6	609	3	179	10	353	19	1,141
Gen. Offices & Bldg.	18	4,939½	9	265	26	1,566	53	6,324½
Private Offices	22	68½	38	62½	49	131½	109	262½
Residences	9	14	11	15	24	43½	44	72½
Restaurant	41	1,566	22	547½	29	496	92	2,609½
Stores								1,752½
Candy	1	4	4	13½	3	5	8	22½
Dept. Cloth. Shoes	7	354	3	16½	17	1,130½	27	1,501
Food	7	385½	0	0	7	385½	7	91½
Miscellaneous	2	215	4	448	2	167	8	830
Studios	1	346	1	9	1	12	3	367
Undertakers	3	50	2	10	5	42½	10	102½
Theaters	54	13,517	14	703	35	1,988	102	16,208
Total	253	32,090½	126	3,119½	239	6,878½	617	42,083½
								26,170½

Table 2—Where Air Conditioning Has Been Installed in Chicago

Place of Installation	Make	Tonnage	Hp.
Banks			
*American National Bank, Foreman Bldg.	Kroeschell	120	200
Chicago Title & Trust, 69 W. Washington	Carrier	300	476
Cont. Illinois Bank & Trust, 2nd Fl.—Leavell	Frigidaire	2	2
Cont. Illinois Bank & Trust, 4th Fl.—Waldeck	Frigidaire	1	1½
Cont. Illinois Bank & Trust, 4th Fl.—Priv. office	Peerless	5	8
Cont. Illinois Bank & Trust, Director's Room	Mehring & Hanson	8	16½
+Cont. Illinois Bank & Trust, Two sub-basements	Hanley-Decalor	150	20
Federal Reserve Bank, La Salle & Monroe	Wittenmeier	55	100
+First Trust & Sav. Bank, Safe Dep. Vaults	Carrier	15	18
Merchandise Bk. & Tr., 222 N. Bank Drive	G-E	7½	7½
Northern Trust Co., La Salle & Monroe	Carrier	250	403
		913½	1,252½
Brokers & Exchanges			
*Bartlett Frazier (Bd. Rd.), 111 W. Jackson	Kroeschell	10	11½
+Bartlett Frazier (3rd Fl.), 111 W. Jackson	G-E	20	23
Chicago Board of Trade, La Salle & Jackson	Wittenmeier	400	550
Chicago Stock Exchange, Monroe & La Salle	Amero. Carbonic	65	138
*E. A. Pierce & Co., 164 N. La Salle	Frigidaire	13½	15
+Shearson Hamill & Co., 208 S. La Salle	Carrier	15	18
Stein Brennan & Co., 215 S. La Salle	Ilg	1	1½
Uhlman Grain Co., Board of Trade	Frigidaire	1	5
		525½	762
Beauty Shops			
Edgewater Beach Hotel, 5349 Sheridan Rd.	Copeland	4½	4½
+Hulda Beauty Shop, Drake Hotel	X-L Refrig. Co.	7	8
Marshall Field & Co., 119 N. State	Carbondale-Trane	25	45
+Bailey Beauty Shop, 5448 N. Clark	Ilg	5	5½
+Selans Beauty Culture, 1547 W. 63rd	Apex Sheet Metal	0	4
		41½	67¾
Churches			
Methodist Episcopal, Clark & Washington	Wittenmeier	65	90
*Our Lady of Grace, 2456 N. Ridgeway	G-E	60	65
Ravenswood Baptist, 4450 N. Seeley	Home-Made	0	5
		125	160
Civic Buildings			
*Adler Planetarium, Grant Park	Carrier	50	116½
Clubs			
Chicago Club, Michigan & Van Buren	Wittenmeier	50	105
Illinois Athletic Club, 112 S. Michigan	L. A. Prentice	25	30
Medinath Athletic Club, 505 N. Michigan	Kroeschell	125	222
*University Club, Michigan & Monroe (small lounge)	Carrier	2	2
		202	359
Dance Halls			
Aragon Ballroom, 1100 Lawrence	Witten-E. V. Hill	225	300
Merry Gardens, 3136 Sheffield	U. S. Air Cond.	0	10
Plaza School of Dancing, 1210 N. Clark	U. S. Air Cond.	0	5
Trianon Ballroom, 6205 Cottage Grove	Wittenmeier	100	150
		325	465
Dentists			
*E. L. Irish, 5959 W. Division	G-E	½	½
+Davies Lazear, 1316 Heyworth Bldg.	Ilg-G-E	1½	1½
*J. D. Ryall, 2912 Milwaukee	Ilg	½	½
*M. D. Strikly, 4443 Sheridan Road	York	1	1
		3½	3½

*Installations sold in 1934.

*Installations sold in 1933.



UNITS

FOR AIR CONDITIONING

When using Reliance Condensing Units you receive the advantages of using equipment made by a company that has been a pioneer in refrigeration and air conditioning development. Your choice of 19 Freon and Methyl Chloride condensing units, 1/3 to 50 tons daily capacity.

RELIANCE REFRIGERATING MACHINE CO.
3409 NORTH KEDZIE AVE., CHICAGO
Export Div.: A. J. Alsdorf Corp., 223 W. Jackson Blvd., Chicago, Ill., U.S.A. Cable ALSDORF-CHICAGO

Place of Installation

Drug Companies

	Make	Tonnage	Hp.
Liggett's, 7 W. Madison	Wendt & Crone	15	15
Liggett's, 33 N. La Salle	Wendt & Crone	50	72½
Rosenbloom, 2634 E. 75th	X-L Refrig. Co.	7	9½
Stineway, 707 N. Michigan	Frigidaire	7	7½
Walgreen, 41 S. State	Dry. Systems	16	28
Walgreen, 111 W. Washington	Dry. Systems	16	28
Walgreen, 7059 Jeffery	Carrier	5	5
Walgreen, 1535 Hyde Park Blvd.	Frigidaire	4	4½
		120	169½

Hospitals

	Make	Tonnage	Hp.
Billings (Experimental), 950 E. 59th	Kroeschell	½	½
Edgewater (2 Hayfever Rooms) 5700 N. Ashland	G-E	2	2
Henrotin (Patient's Room), 939 N. La Salle	Kroeschell	½	½
Jefferson Pk. (Operating Rms.), 1410 W. Monroe	E. V. Hill	3	3½
Michael Reese, 29th & Ellis	Wittenmeier	25	30
Passavant (Oxygen Room), 303 E. Superior	Wittenmeier	2	3
St. Luke's Hospital, 1439 S. Michigan	G-E	2	2
		35	41½

Hotels

	Make	Tonnage	Hp.
Atlantic, 316 S. Clark	Wittenmeier	55	95
Atlantic Tavern, 316 S. Clark	Wittenmeier	20	20
Belmont, 3136 Sheridan Road	Wittenmeier	25	60
Bismarck, 171 W. Randolph	G-E	(See Restaurants)	
Blackstone, Michigan & 7th	Wittenmeier	100	245
Congress, Congress & Michigan	Kroeschell	120	225
Congress (Urban Room), Congress & Michigan	Kroeschell</		

Scott-Newcomb, Inc. Develops Winter Air Conditioner

ST. LOUIS — Scott-Newcomb, Inc., is introducing a new S-N air conditioner, designed in general along the lines of the S-N oil furnace and intended for installation with that and other warm air heating plants.

The burner, entirely enclosed, is located just under the combustion chamber of the furnace proper, and uses either a vertical flame oil burner or a bunsen-type gas burner. Access to the burner or the air blowers is by panels which are easily removed.

The products of combustion flow upward, passing over the rear wall of the combustion chamber and downward and out into the bottom of the economizer sections. There are six of these sections, and the hot gases pass upward to the top and back, where they enter a header connecting with the flue.

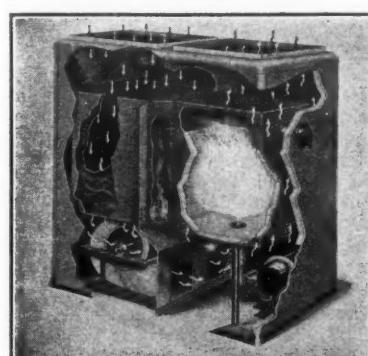
Air filters (which are removable from either side of the furnace through removable panels) are located just above the economizer sections, and the air flows downward through and around the end and back sections and into the suction of the blowers. These are under the economizers, and sit on the floor in rubber cushioned mountings in a frame which has no mechanical connection with any part of the furnace.

Air is delivered to the burner compartment through canvas connections, the blower and burner being separated by partitions.

Air for the burner is taken through a separate pipe, which connects to the outside of the casing so that no air from the blowers proper is furnished to the burner.

Water spray for humidification is located just under the lower part of the combustion chamber. Cooling coils

Air Conditioner



Skeletonized picture of S-N conditioner, shows air course.

for summer use are provided in the intake compartments when needed.

On its way to the blowers, the air passes through filters, contacting with the top or coolest part of the economizer section, where the header to the flue or chimney is located.

Passing downward, the air is heated progressively by plates which are hotter and hotter, finally passing to the intake of the blowers, where it is discharged at the hottest part of the conditioner, resulting in true contra flow.

Interior of the case is lined with air cell insulation, and quiet operation is insured through the air blowers and burner being mounted on rubber cushions.



The Ansul tradition...to make as fine refrigerants as it is possible to produce...was established years ago. That this ideal has never for a moment been lost sight of is evidenced by the reputation for high quality products that has been established.

You will find Ansul Sulphur Dioxide and Ansul Methyl Chloride perfect for refrigeration purposes. Quality is guaranteed because every cylinder is given an individual analysis.

ANSUL CHEMICAL CO.
MARINETTE - WISCONSIN

Table 2 (Continued)

(Continued from Page 10, Column 2)

Place of Installation	Make	Tonnage	H.P.
General Offices & Buildings			
A. C. Allyn & Co., 100 W. Monroe	Kroeschell	38	73
*A. B. Dick & Co., 720 W. Jackson	Carrier	50	69
†A. B. Dick & Co., 736 W. Jackson Blvd.	Carrier	160	240
*American Asphalt Paint Co., 43 E. Ohio	Wittenmeier	30	35
Armour & Co., Stock Yards	Assembled	1,500	2,250
Barco Mfg. Co., 1801 Winnemac	Kroeschell	35	60
*F. H. Bartlett Co., 33 W. Washington	Frigidaire	6	6½
Bear Brand Hosiery, 538 S. Wells	E. V. Hill	10	12
†Bradner Smith & Co., 333 S. Desplaines	Frigidaire	0	5
Brinks Express Co., 571 W. Jackson Blvd.	Fairbanks Morse	10	10
Burkhardtmeier Cooperage, 7244 S. Chicago	Frigidaire	2	2
*Burroughs Add. Machine, Wells & Washington	Ilg	2	3½
Chicago Cardboard, 666 W. Washington	Kroeschell	750	900
†Chicago Tribune Tower, 435 N. Michigan	Kroeschell	7	9
Commonwealth Edison, 72 W. Adams	Kroeschell	600	300
Containers Corp., 111 W. Washington	Carrier	220	400
Coyne Electrical School, 500 S. Paulina	Carrier	30	35
†Fabart Instrument Co., 4740 N. Clark	York	5	6½
Field Building (Four Fls.), La Salle & Adams	Dry. Systems	5	6
*Frigidaire Sales Corp., 2031 Calumet	Carrier	750	900
Goldblatt Bros., 3938 N. Winchester	Frigidaire	10	10
*Hugo Delmar & Co., 157-85 W. Jackson	Nat'l Korecta	10	13½
Ilg Ventilating Co., 2850 N. Crawford	Frigidaire	5	5
†Lanzit Corrugated Box Co., 2435 N. Rockwell	Ilg	3	5
Marriott Coal Co., 2500 Fulton	Ilg	2	3
Marshall Field & Co., Merchandise Mart	Kroeschell	1½	1½
†Merchandise Bl. & Tr., 222 N. Bank Drive	Self Made	75	75
Merchandise Mart, 222 N. Bank Drive	G-E	15	17
Monroe-Dearborn Bldg., Monroe & Dearborn	Kroeschell	2	2
*Morton Bldg., (Tax Bldg.), Morton Bldg.	Amer. Carbonic	150	290
Neo Gravure, 2242 Grove	Ingersoll Rand	90	146
Oppenheimer Casing Co., 1016 W. 36th	Kroeschell	30	61½
*Phoenix Metal Cap Co., 2444 W. 16th	Air Cond. & Coolg.	30	43½
R. R. Donnelly & Co.	B. Offen	10	13½
Reuben H. Donnelly Co., 2101 Calumet	Carrier (Steam)	0	26
Servel Co., 549 W. Randolph	Carrier	175	285
*Silberman & Becker, 1117 W. 35th	Servel	3	3½
Smith, H. P., 1130 W. 37th	E. V. Hill	6	7½
*So. Shore Investment Co., 7459 S. Exchange	York	12	13
Swift & Co., Stock Yards	Witten-Bloom	25	30
*Swift & Co., Stock Yards	Frigidaire	20	23
Tablet & Ticket Co., 1021 W. Adams	Vilter	40	40
†Tablet & Ticket Co., 1021 W. Adams	Carrier	5	5
Union Stock Yards & Trans., Stock Yards	Carrier	0	2
Western & Campbell, 1113 Cornelia	Wittenmeier	5	5
*Western Felt Works, 4115 Ogden		4,675½	6,324½
*Western Shade Cloth, 22nd & Jefferson			
Wieland Dairy Co., 3638 N. Broadway			
Wilson & Co., Stock Yards			
Wilson Western Sport Goods, 2037 N. Powell			
*Wittenmeier Machinery, 850 N. Spaulding			

Offices, Private

A. & G. Spaulding & Co. (2), 211 S. State	Ilg	2	3
*American Linen Supply Co., 829 N. Franklin	G-E	3	3
*American Loose Leaf Mfg., 2966 Cottage Grove	G-E	1	1
*Armstrong Paint & Varnish, 211 S. State	Ilg	2	3
*A. P. (2), 2622 N. Crawford	Frick	4	5
Bassler, C. J., 221 N. La Salle	G-E	1	1
*Birtman Electric Co., 4140 Fullerton	Kroeschell	1	1½
Bloom, G. T., 549 W. Randolph	Servel	3	3
*Budd, Britton L., 72 W. Adams	Carrier	2	2
*Burridge, H. J. (Ins.), 175 W. Jackson	Ilg	½	½
*Central Wax Paper Co., 5655 W. Taylor	York	1	1
*Chicago Curtain Stretcher, 3725 Wall	Wendt & Crone	2	2
*Chicago Mail Order Co., 511 S. Paulina	Kroeschell	1	1½
*Chicago Daily News, (4), 1 N. Canal	Kroeschell	16	18
*Curtiss Candy Co., (Pres. Office), 622 Diversey	Kroeschell	1	1
Continental Can Co., 5401 W. 65th	Carrier	9	6
*Carrier Eng. Corp., 180 N. Michigan	Carrier	7	9
Carrier Corp., 180 N. Michigan	Carrier	4	4
*Cooper, R. Jr., (Tel. Rm.), 221 N. La Salle	G-E	½	½
Copeland Refrig., 540 N. La Salle	Copeland	1	1
Clark, Harley, 327 S. La Salle	Frigidaire	1	1½
*Defrees Buckingham Jones, 105 S. La Salle	Frigidaire	1	1
*Daily Times, (2), 211 W. Wacker Drive	Frigidaire	1	1
*Doyle, E. J., 72 W. Adams	Frigidaire	2	2
*Daves, Rufus, Century of Progress	Kroeschell	1	1½
*Denison, T. S. & Co., 623 S. Wabash	Kroeschell	2	2
*Easaness Theater Corp., 540 N. Michigan	G-E	1	1
*Evers, J. W., Jr., 72 W. Adams	Witten-Trane	1	1
*Fairbanks Morse, 900 S. Wabash	Kroeschell	1	1
*Ferguson, L. A., 72 W. Adams	Fairbanks Morse	10	10
*First Trust & Sav. Bk., First Nat'l Bk. Bldg.	Kroeschell	1	1
*Follansbee, Shorey & Schupp, Field Bldg.	G-E	3	3
*Frigidaire Sales Corp., 2021 Calumet	G-E	1½	2
*Gilmchrist, John F., 72 W. Adams	Frigidaire	3	3
*Gosard Corset Co., 108 E. Ohio	Carrier	1	1
*Haskelite Co., (Pres. Office), 208 W. Washington	Kroeschell	3	4
Hart, Schaffner & Marx, (Pres.)	Ilg	½	½
Franklin & Monroe	Ilg	1	1½
*Helmhold, J. F., 1462 Custer	Frigidaire	3	3
*Heller, B. & Co., (Chemicals), 3925 Calumet	G-E	2	2
*Illinoi Steel Co., 208 S. La Salle	E. V. Hill	1½	1½
*Ins. Co. of America, 209 W. Jackson	Frigidaire	1	1
*James, Col. R. H., 72 W. Adams	CARRIER	3	3
Jelke Co., (3 priv. off.), 759 S. Washtenaw	Campbell	1	1
*Johnson, Frank H., 228 N. La Salle	G-E	3	3½
*Katzinger, Edw., Co., 1949 N. Cicero	Carrier	1	1
*Kissproof, Inc., 4316 N. Kilpatrick	Ilg	½	½
*Kelly, (Mayor), City Hall	Kroeschell	1	1
*Laundry & Dye Hse. Assoc., 629 S. Ashland	Frigidaire	5	5½
Lasker, A. D., Palmolive Bldg.	Kroeschell	2	2
*Lohr, (Major), Century of Progress	Carrier-Kelv.	1	1½
Lloyd, E. W., 72 W. Adams	Ilg	½	½
*Letterstone Sales Co., 2339 S. Wabash	Peerless	2	6½
Lord, Thomas, & Logan, Palmolive Bldg.	Dry. Systems	3	5
*Long, W. E., 155 N. Clark	Kroeschell	1	1
*Marquette Cement Co., Marquette Bldg.	Frigidaire	3	3
*Mayor's outer office, City Hall	G-E	½	½
*Miller's Nat'l Ins. Co., (Mr. Giles), 175 W. Jackson Blvd.	York	2	2½
*Miner, W. H., Inc., (3), 209 S. La Salle	Kroeschell	½	½
*Miami Corp., 410 N. Michigan	Frigidaire	1	1
*Marsh, James B., Corp., 2073 Southport	Ilg	1	1½
*Mills Novelty Co., 4100 Fullerton	Brunsch.-Kroeschell	5	7½
*Morton Bldg., (D. Peterkin), 208 W. Washington	Peerless	2	4½
McCormick, Col. R. R., Tribune Tower	Frigidaire	1	1¼
McLennan, O. R., 175 W. Jackson Blvd.	Frigidaire	3	3
*Montgomery Ward, (V.P. Folger), 619 Chicago	Carrier	1	1
Montgomery Ward, (Sewell Avery), 619 Chicago	Frigidaire	1	1
Montgomery Ward, (3 offices), 619 Chicago	Carrier	1	1
*Montgomery Ward, (V.P. Folsom), 619 Chicago	Frigidaire	1	1
*Montgomery Ward, (V.P. Hoving), 619 Chicago	Carrier	1	1
Musik Corp. of America, 32 W. Randolph	Frigidaire	1	1
Nutrine Candy Co., 419 W. Erie	Carrier	1	1
*Nat'l. Underwriters, 175 W. Jackson Blvd.	Ilg	½	½
*Nat'l. Tea Co., 1000 Crosby	G-E	3	3
*Olson, John T., First National Bank Bldg.	Carrier	2	2½
*Pabst Corp., 221 N. La Salle	G-E	6	6½
*Pepsodent Co., 917 N. Michigan	Narowitz	0	3
*Rialto Trust Co., 332 S. La Salle	Campbell	3	4
*Portland Cement Association, 33 W. Grand	Kroeschell	1	1
Rothschild, Maurice L., 304 S. State	Frigidaire	1	1
*Pratt & Lambert Co., 320 W. 26th St.	York	1½	1½
*Public Service Co., 72 W. Adams	Frigida		

Table 2 (Continued)

(Concluded from Page 11, Column 3)

Place of Installation	Make	Tonnage	Hp.
Restaurants			
†Anne's, 87 W. Randolph	Frigidaire	10	12
Anne's, 91 W. Randolph	Wittenmeier	20	55
Anne's, 57 E Adams	Wittenmeier	15	28
*B. & G. Sandwich Shop, 119 S. Clark	Kroeschell	(Incl. in "Triangl")	
*Boston Oyster House, 21 S. Clark	York	35	40
†Bismarck Inn, 124 N. La Salle	Vilte	(See Bismarck Hotel)	
†Brevoort Hotel, (3 Restr's.), 120 W. Madison	G-E	60	62
Burnham Bldg. Rest., 160 N. La Salle	U. S. Air Cond.	0	8
Candy Box, 29 N. State	Ilg	10	13
Carders, 118 N. Dearborn	Hattie	8 (Ice)	2
Chez Paree, 247 E. Ontario	U. S. Air Cond.	0	22½
Conway, 111 E. Washington	Carrier	20	23
De Met's, Inc., Adams & State	Wittenmeier	50	77½
De Met's, Inc., Madison & State	Copeland	4	4½
De Met's, Inc., 312 W. Madison	Dry. Systems	18	20
*De Met's, Inc., 5 W. Randolph	Carrier	25	30
*De Met's, Inc., 1 N. La Salle	Carrier	30	40
De Met's, Inc., 332 N. Michigan	York-Kaiser	20	27½
De Met's, Inc., 141 W. Jackson Blvd.	Wittenmeier	80	100
Eitel, Inc., 520 W. Madison	Wittenmeier	75	130
Ehrlich's, 2107 E. 71st	Copeland	7	8
†Exchange Cafe, 175 W. Jackson Blvd.	G-E	15	16½
†Fish Bar & Rest., Inc., 32 S. Michigan	Assembled	20	25
†Feltman's Sandwich Shop, 35 N. Dearborn	York	7½	8½
*Grossmanns, 18 N. Clark	U. S. Air Cond.	0	5½
*Green Mill, 178 W. Randolph	Kroeschell	35	75
Gimbel's Inc., 30 W. Randolph	Kroeschell	40	78
Gold's, 808 W. Roosevelt Road	U. S. Air Cond.	0	8
†Goodman Brothers, 1128 W. 14th Place	Kroeschell	25	50
Harmony Cafeteria, 214 S. State	Ilg-Vilte	5	10
Hardings, J. P., 132 W. Van Buren	U. S. Air Cond.	0	15
Hardings, J. P., 21 S. Wabash	U. S. Air Cond.	0	10½
Hardings, J. P., 114 W. Monroe	U. S. Air Cond.	0	13
†Harry's New York Bar, 400 N. Wabash	Vilte-Hartman	65	90
Henrich's, 71 W. Randolph	Brunn.-Kroeschell	Wittenmeier	
Hillmans, 24 W. Washington	Wittenmeier	20	30
Hoe-Sai-Gae, 75 W. Randolph	Kroeschell	20	28
†Huyle's, Palmolive Bldg.	U. S. Air Cond.	0	5
†Heibel, Otis Bldg., 10 S. La Salle	York	6½	9
†Ins. Exchange Choc. Shop, 175 W. Jackson	Assembled	0	5½
†Irelands Oyster House, 634 N. Clark	G-E	5	6
†Isbells, 590 Diversey Parkway	Frick	15	20
L'Aiglon, 30 E. Ontario	G-E	10	11½
†Lauer Sisters, 462 W. 63rd	Trane	0	1
Lawson Y. M. C. A., 801-9 N. Dearborn	Samson Elec.	10	10
†Leavitt Bros. Food Shop, 1328 S. Halsted	U. S. Air Cond.	0	8
Limehouse, 1563 Howard	Kroeschell	35	48
Little Jack's, 3175 W. Madison	U. S. Air Cond.	0	8
M & C Cafeteria, 3900 W. Madison	Thermal Unit	5	½
Market Luncheonette, 1427 S. Racine	Carrier (Steam)	30	15½
Maurice, 173 W. Madison	Acme-Carrier	20	25
*Mitchell's, 18 S. Clark	Amer.-Carbonic	100	140
Merchandise Rest., Inc., 220 N. Bank Drive	U. S. Air Cond.	0	20
Nankin, 168 W. Randolph	U. S. Air Cond.	0	20
Nankin, 168 W. Randolph	Assembled	25	25
†Normandy Inn, 100 N. La Salle	Vilte	65	84
*North American, State & Monroe	Midwest	10	12
O'Connell's, 64 W. Madison	Carrier	3	5
O'Connell's, 112 W. Wilson	Kaiser-Midwest	15	16½
Ogden Grill, 192 N. Clark	Vilte	20	25
Pittsfield Grill, 55 E. Washington	Carrier	20	20
*Prices Grill, 224 S. Wells	Midwest-Harbula	14	14
*Pixley & Ehlers, 205 S. Wabash	Midwest-Harbula	18	18
*Pixley & Ehlers, 180 N. Wells	Midwest-Harbula	15	14½
*Pixley & Ehlers, 206 W. Jackson Blvd.	Brunn.-Kroeschell	50	73
*Pixley & Ehlers, 33 W. Madison	Harbula	20	25
*Pixley & Ehlers, 1606 W. Madison	G-E	10	12
Rickett's (E), 103 E. Chicago	Frigidaire	13	13
*Rickett's, 2727 N. Clark	U. S. Air Cond.	0	3
Rickett's, 1004 N. Clark	Kroeschell	30	33
Sally's, 4650 Sheridan Road	U. S. Air Cond.	0	12½
Sheridan, 3946 Sheridan Road	G-E	5	6
Superior Tea Room, 1748 W. 95th	Acme-Carrier	20	21
Siegel's, 8276 S. Chicago	Kroeschell-Witten.	U. S. Air Cond.	
Stop & Shop, 24 W. Washington	Mellish & Murray	0	10½
*The Ranch, (G.T.), 123 E. Oak	4 (Ice)	5	
Thompson's, 2745 N. Clark	Vilte-Hartman	65	75
†Thompson's, 27 W. Randolph	York	7½	9
Tower Grill, 72 E. Madison	Carrier	75	95
Triangle, 57 W. Randolph	Burge	20	30
Triangle, 6 So. Clark	Kroeschell	60	90
Triangle, 119 S. Clark	Frick-Midwest	32	85
Triangle, 171 W. Madison	Brunn.-Kroeschell	60	90
Triangle, 225 S. Wabash	Frigidaire	3	3
225 Club, 225 E. Superior St.	Am. Refrig. Sys.	0	20
225 Club, 225 E. Superior St.	Frigidaire	18	20
225 Club, 225 E. Superior St.	Carrier	20	23
Vassar House, 540 N. Michigan	Frigidaire	3	3
Vienesse, 208 W. Adams	Servel	1	1½
Voigt's, 207 W. 63rd	Brunn.-Kroeschell	75	140
*Voigt's, 6309 S. Halsted	Ilg	1	1½
*Voigt's, 6305 Cottage Grove	Carrier	3	3½
Walter Power's Co., Madison & Crawford	Ilg	32	42
White Horse Tavern, 2720 N. Clark	York	15	17½
		1,752½	3,009½

Candy Stores

Andes Candies, 1109 S. Michigan	Ilg	1½	2
*Mrs. Snyders, 2030 E. 71st	Carrier	3	3
*Mrs. Snyders, 20 S. Dearborn	Carrier	3	3
*Mrs. Snyders, 332 S. La Salle	Campbell	5	6
*Mrs. Snyders, Palmer House	G-E	3	3
*Mrs. Snyders, 65 W. Randolph	Vilte		
*Mrs. Stevens Candy Shop, 52 W. Washington	Frigidaire	1	1½
Teakwood, Inc., 53 E. Madison	Copeland	4	4
		20½	22½

Dept., Clothing & Shoe Stores

Betty Lloyd Dress Shop, 1938 E. 71st	Servel	1	1½
Blum's Vogue, (Ladies Appl.), 630 S. Michigan	Brunn.-Kroeschell	75	140
Eisenberg & Sons, (Dresses), 309 W. Jackson	Ilg-Kold	1	2
Graysons, Inc., (Dresses), 36 State	Wittenmeier	75	75
*Mandel Brothers (2 basements), Madison & State	Carrier	300	105
Neudecker Hosiery, 55 E. Randolph	Frigidaire	3	3½
†Powell, (Dresses), 700 N. Michigan	Frigidaire	3	3½
†Morris B. Sachs, (Clothes), 6638 S. Halsted	G-E	20	23
Sally K. Greenbaum, (Dresses), 530 N. Michigan	Wendt & Crone	3	3½
*Sally K. Greenbaum, (Dresses), 530 N. Michigan	Frigidaire	3	3
Sears Roebuck Co., 63rd & Cottage Grove	Ingersoll-Rand	500	865
*Stayform Co., (Fitting Rm.), 17 N. State	Ilg	3	3½
The Fair, State & Adams	Witten-E. V. Hill	150	175
Blackstone Shop, (Fur), 669 N. Michigan	Ilg	3	3½
Berman, Louis, (Fur), 333 N. Michigan	G-E	5	5
Evans Fur Co., (Fur), 162 N. State	Carrier	10	12
Glass, J. & Co., (Fur), 180 N. Michigan	Ilg	¾	1
Hoffman & Morton, (Fur), 180 N. State	Copeland	1	1
Maurice Silvey Fur Co., 3326 W. Madison	Copeland	1	1½
Walzer, H. & Co., (Fur), 215 N. Michigan	Vilte	20	23
Burt's Shoe Store, 42 S. State	Carrier	3	3
Florsheim Shoe, 12 N. Dearborn	Carrier	3	3
Florsheim Shoe, 32 E. Jackson	Carrier	3	3
Maling Bros. (Shoes), 231 S. State	Trane	10	10
Maling Bros. (Shoes), 34 S. State	Wittenmeier		
Dr. Scholl's Foot Comfort, 21 N. Wabash	Frigidaire	4	4½
Wolock & Bauer, (Shoes), 4 N. Michigan	Amer. Carbonic	20	30
W. T. Grant, 100 S. State	Mehr & Hansen-York	125	165
		1,343½	1,666

*Installations sold in 1933.

†Installations sold in 1934.

Place of Installation

Food Stores

Place of Installation	Make	Tonnage	Hp.
A. & P., Howard Street	Carrier	10	11½
A. & P., 549 Diversey	Carrier	3½	4½
Fulton Market, 904 Fulton	York	1	1½
Hillman's, 24 W. Washington	Bruns.-Kroeschell	175	365
Rosyath's Market, 3932 Lincoln	Copeland	1	1½
Schwefer's Bakery, 2952 N. Clark	Frigidaire	1	1½
Stop & Shop, 24 W. Washington	Bruns.-Kroeschell		
		191½	385½

Miscellaneous Stores

Place of Installation	Make	Tonnage	Hp.
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SERVICE

Combined Electric & Refrigeration Course Taught at Coyne School

By Phil B. Redeker

CHICAGO — Strictly a "residential" trade school is the Coyne Electrical and Radio School of this city. No part of any of its courses are taught by correspondence, and all students must come to Chicago to "go to school" at Coyne's five-story building on South Paulina St.

Coyne is (and has been for most of its 35 years of existence) primarily an electrical school. Three and a half years ago Coyne inaugurated a separate, complete electric refrigeration and air-conditioning course (it had been teaching some refrigeration as part of its general electrical course) and in the period since that time has graduated some 1,500 students in this course.

Keep Record on Graduates

Some of these graduates have found places with refrigeration manufacturers—one, for example, is in charge of factory service on the U. S. Hermetic machines while another found a place with Frigidaire. Most of the graduates in refrigeration, however, have found places with distributors, large dealerships or with service firms—Coyne has a portfolio of letters from these former students to prove that its graduates get jobs.

The course which Coyne recommends on refrigeration is really a combined electrical-and-refrigeration curriculum. The course requires from three to six months for completion, depending upon the aptitude of the student.

If a prospective student wants to take the refrigeration course alone, he must first take a preliminary examination to prove to the satisfaction of Coyne's staff that he is well grounded in the fundamentals of electricity, and that he can put his knowledge of electricity into practice.

Cost of Course

Cost of the combined course is \$245, if it is pre-paid or paid during the time it takes to complete the course. Coyne also has a deferred payment plan, but a student who wants to take advantage of this plan must be able to make a down payment of \$25 and obtain a responsible endorser for his note on the balance. The deferred payment plan also carries an added charge of \$15.

Cost of the "refrigeration and air-conditioning" short course for those who have had previous training or experience in electricity is \$155.

There are no extra fees for tools, materials, or laboratory equipment, but students are charged for careless breakage of the school's equipment.

Coyne students go to school seven hours a day, five days a week. They are also expected to do "home work," studying their lecture and shop notes at night.

The Coyne staff does not contend that it teaches an electrical engineering course. Says C. A. Richards, shop superintendent—"all we attempt to do is to fill the gap for the unskilled,

usually uneducated, young man—to train him to be a skilled worker."

Hours which the Coyne students put in at the school are divided roughly into two classifications—theory, in the form of lectures in which "high speed" methods are used to implant the fundamentals in the student's mind, and the laboratory and shop work, where the student puts into practice what he has learned in the lectures.

Electrical Part of Course

The electrical part of the course is split up into a number of "departments" which may be described briefly as follows: 1) elementary and circuit department, 2) construction or wiring department, 3) armature department, 4) direct current department, 5) alternating current department.

In the circuit department, the student works with batteries, motors, phones, tubes, etc. In the construction department he gets instruction in house wiring, threading and cutting conduit, illumination, range wiring, etc. Training in the armature department deals with winding, testing and repairing armatures and starters. The d.c. and a.c. departments are "finishing up" courses in which the student gets to put into practice much of what he has learned previously.

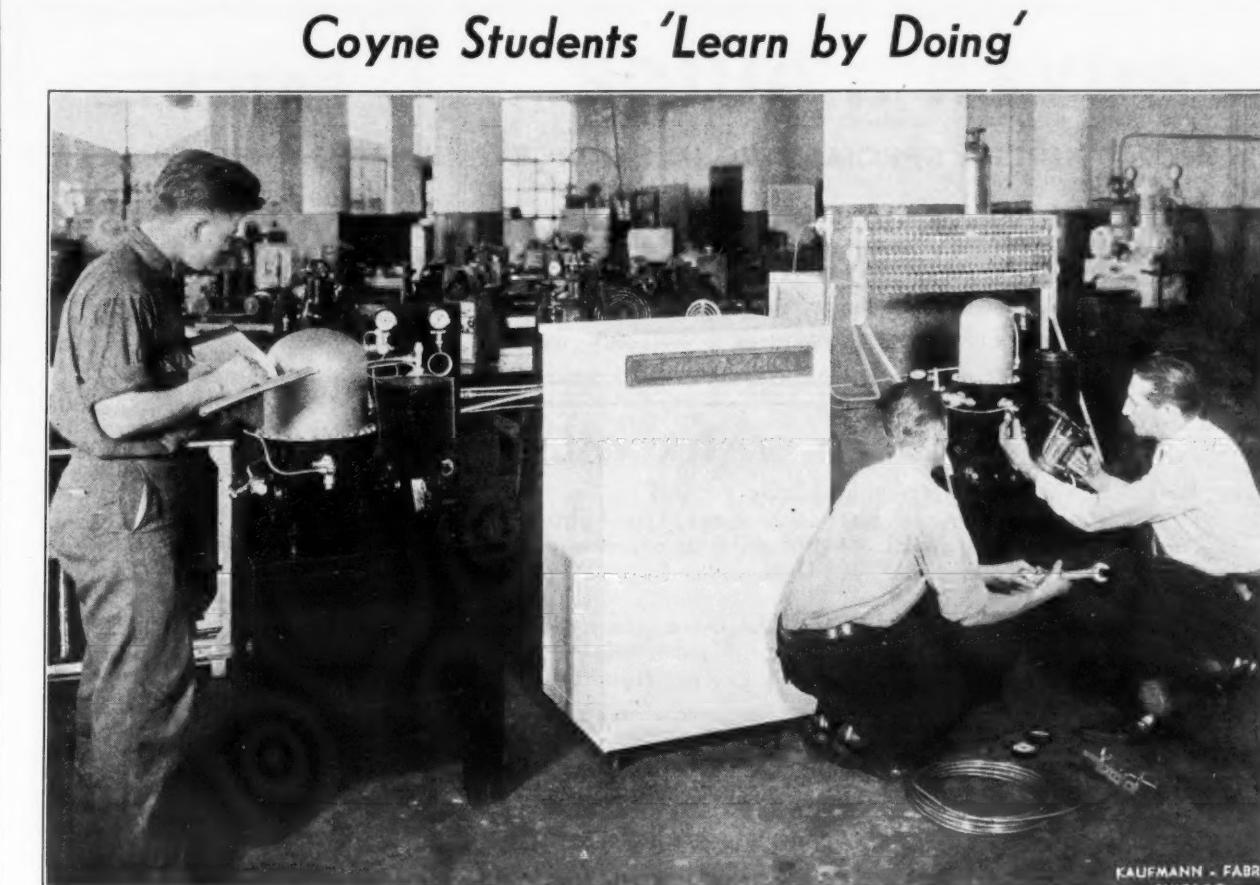
Some of the points covered in the refrigeration part of the course—picked at random from the schedule for the course—include the following:

Function of compressor and all parts of compression system, calculation of temperature drop per cu. ft. of cabinet space per lb. of evaporated liquid, shaft seals, peculiarities and machining accuracy requirements of rotary compressors, design and operation of control valves, flooded and dry-type evaporators, power bulb thermostats, multiple installations, location of valves and manifolds, service procedure and tests, procedure for testing compressor control valve, characteristics of refrigerants and methods of leak detection, starting switches, refrigerator motors, temperature and humidity tests on air conditioning.

Method of Checking Work

The student is carefully graded and checked in his work. Grading is on the basis of the "100 per cent equals perfect" system, with the 100 per cent split up according to the various types of schooling methods which Coyne employs.

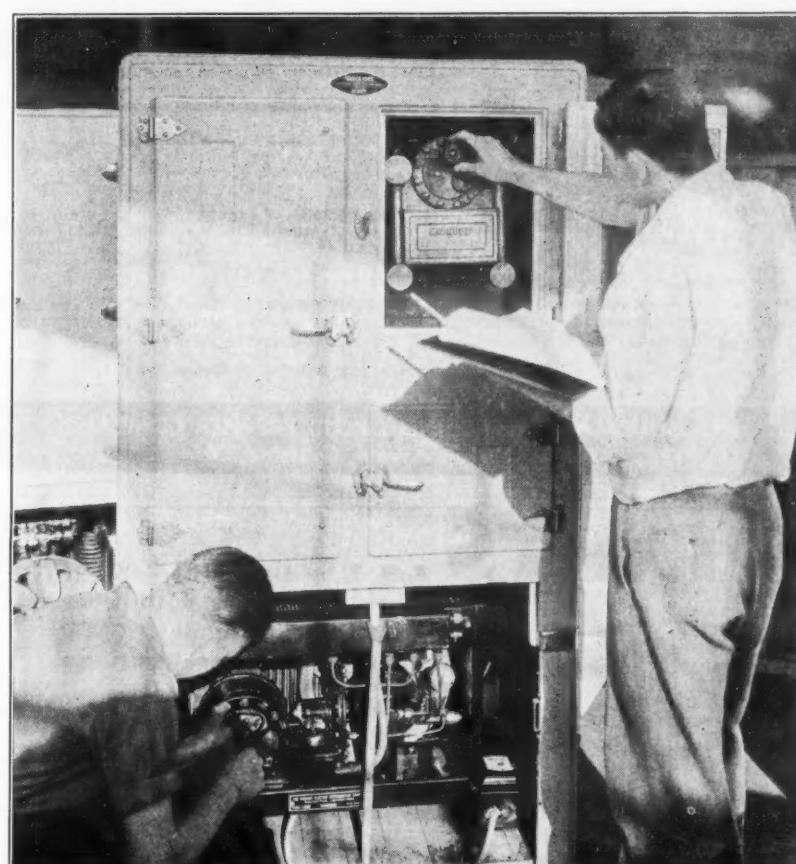
Shop work counts for 50 per cent. In each department, the student will undertake from 15 to 50 shop jobs, carrying out all stages from wiring, installation, etc. Instructors will give advice if the student requests it, but students are not allowed to "lean" upon the instructor—that is, to have the instructor virtually do the job for them.



KAUFMANN - FABR

Students at Coyne work with many types and makes of refrigeration systems. At the right an instructor and student are testing one of the commercial units, which in this case is hooked up to a room cooler.

Servicing an 'Orphan Make'



These two Coyne students check their lecture notes by working with an Iroquois household refrigerator of an early date.

units and an ammonia machine operating a brine circulating system.

For air conditioning, Coyne has built a small test bungalow right in its factory, and cools it with a York Freon 5-ton refrigerating machine.

Coyne doesn't boast that its staff of instructors are all college graduates with engineering degrees, but it does claim that they all have a good background of practical experience, and that they have a special knack for teaching their respective subjects.

"In our type of school, 'teaching ability' is all important," says Mr. Richards. "We must have the type of instructors who can get the necessary knowledge over to the student quickly and surely."

Chief instructor in the refrigeration department is R. C. O'Hare, who was formerly chief tester in the refrigeration production division of General Household Utilities Co., manufacturer of the Grunow refrigerator.

S. A. Cherry, head instructor in the electrical department, is a former electrical contractor and was at one time connected with an electrical railway company. R. A. Dixon, instructor in d.c. equipment, was an electrical and motor maintenance engineer for a mining firm. Andrew Kyle, instructor in the a.c. department, is an Australian who was previously employed as a consultant on electrical welding machinery.

President of the Coyne school is H. C. Lewis, who concerns himself chiefly with the financial and operating affairs of the school. Mr. Richards, the shop superintendent, has been with Coyne 14 years.

When the Coyne student arrives at the school in Chicago, he is (if he is accepted as a student) turned over to the welfare department, whose duty it is to see that the students are placed in living quarters that are

personally inspected and checked by the head of the welfare department.

Many students desire to work at part time jobs while attending the Coyne school, and while Coyne officials seek to discourage part-time work, on the grounds that the student won't get as much out of his schooling, they will aid students who insist on working in finding a job.

The matter of finding a part-time job for students is turned over to the school's vocational bureau, which has contacts with nearby restaurants, cafes, rooming houses, and apartment buildings. Most of the jobs take the form of waiting on tables, dishwashing, or janitor work.

Of the 700 students now enrolled at Coyne, some 250 are working at part-time jobs, states Mr. Richards.

The vocational bureau also operates to help Coyne graduates get jobs upon the completion of their course. An extensive file of prospective employers is maintained, and old Coyne graduates holding responsible positions are contacted.

In addition to this Coyne publishes an "Employers' Guide" which is sent to about 10,000 employers of technicians. In this "guide" are published, in classified advertisement style, names and addresses (by states) of Coyne graduates who are seeking a position. Employers are thus enabled to get in touch very quickly with any Coyne graduate residing in their territory.

Another thing that Coyne does to help its graduates is to send out a publicity release to the graduate's home town paper, announcing that he has completed his course and is returning home.

"This often prompts some local employer to hire the home-owner who has completed the course," says Mr. Richards.

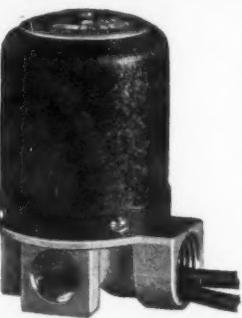


At the left an instructor and student check operating pressures on the 5-ton unit which cools the test bungalow. Through the window of the bungalow can be seen a student studying recording instruments.

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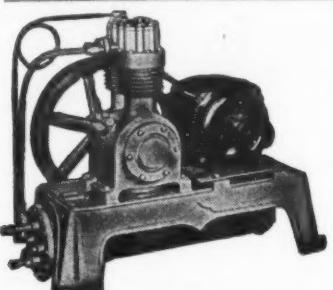
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PATENTS

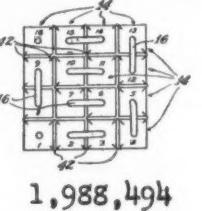
Issued Jan. 22, 1935

1,988,482. ICE SHAVER. Clement C. Clawson, Jr., Flagtown, N. J., assignor to The Clawson Machine Co., Inc., Flagtown, N. J., a corporation of New Jersey. Application Sept. 30, 1930. Serial No. 485,362. 2 Claims. (Cl. 83—62)

1. In an ice shaver, a cutting unit comprising a cutter head having a forward circular working face, said cutter head being provided with three relatively wide radial slots therein disposed in Y formation, the point of juncture of said slots being at the center of said working face, said cutter head being cut away along small arcs adjoining the point of juncture of said slots in order to facilitate the flow of ice shavings through said radial slots, three knife blades, each of said knife blades being adjustably attached to a wall of a respective one of said radial slots, each of said knife blades having a cutting portion of a length equal to one-third of the length of one of said slots, said cutting portion being positioned at a distance radially from the center of said cutter head that is unequal to the radial distances of the remaining cutting portions from the center of said cutter head, whereby the cutting portions of each of said knife sweeps over an annular cutting area in use that is different from the annular cutting areas of the remaining cutting portions, so that the ice shavings produced by each cutting portion are of uniform quality owing to the independent cutting action of each cutting portion.

1,988,494. HEAT EXCHANGER. Anthony F. Hoesel, Chicago, Ill., assignor to Charles C. Kritzer, Chicago, Ill. Application Feb. 5, 1932. Serial No. 591,086. 10 Claims. (Cl. 257—148)

2. A heat exchanger comprising a one piece finned tube bent to provide a plurality of banks of nested fins having

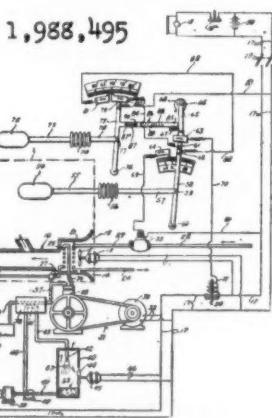


1,988,494

their tube reaches arranged in parallelism, the fins being rectangular in contour with their corners axially aligned and having notches in their corners, and a bracing strip arranged to be driven into the aligned notches in two adjacent banks for tying the fins in each bank into a rigid assembly and interconnecting said banks in pairs.

1,988,495. TEMPERATURE CONTROL. George E. Hulse and John D. Strobell, New Haven, Conn., assignors to The Safety Car Heating & Lighting Co., a corporation of New Jersey. Application Jan. 15, 1931. Serial No. 508,835. 31 Claims. (Cl. 236—1)

1. In apparatus of the character described, in combination, means forming a space whose temperature is to be regu-



1,988,495

lated, a refrigeration unit for said space, a controlling system for said refrigeration unit comprising thermostatic apparatus responsive to the temperature inside said space, thermostatic apparatus responsive to the temperature outside said space, said two apparatuses adapted to place said refrigeration unit in operation when the parts of said two apparatuses are in certain positions, said second-mentioned thermostatic apparatus adapted to change the position of one of the parts of said first-mentioned apparatus to change the controlling standard of said controlling system.

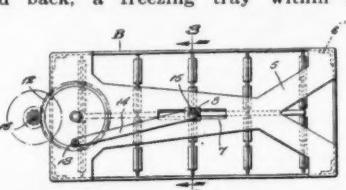
1,988,496. TEMPERATURE CONTROL. George E. Hulse and John D. Strobell, New Haven, Conn., assignors to The Safety Car Heating & Lighting Co., a corporation of New Jersey. Application Feb. 12, 1931. Serial No. 515,200. Renewed July 25, 1934. 36 Claims. (Cl. 236—1)

1. In apparatus of the character described, in combination, means forming a space whose temperature is to be regulated; refrigeration means for said space, said refrigeration means including adsorbing means; means for rendering said adsorbing means operative to cause said refrigeration means to effect cooling of said space and to maintain a predetermined difference in temperature between the outside and the inside of said space as the outside temperature varies; and means for rendering said adsorbing means inoperative, thereby to prevent refrigeration, when the outside temperature reaches a certain minimum value.

1,988,542. FREEZING TRAY AGITATOR. Ruth L. Coleman and Robert L. Sandberg, Long Beach, Calif. Application Aug. 21, 1934. Serial No. 740,831. 2 Claims. (Cl. 259—113)

1. In an agitator device of the kind

described, the combination of a freezing compartment permanently fitted within an electric refrigerator and open at its front and back, a freezing tray within said

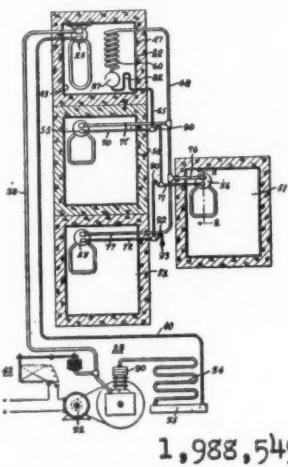


1,988,542

compartment and removable through its open end, a chassis closing said tray and separable therefrom, a motor unit for mounting at the rear of said compartment and having a vertically disposed driving shaft confronting the back opening of said compartment, a removable agitator depending within said tray and slidably connected with the chassis, a driven gear on the chassis for projection through the back open end of the compartment, a link eccentrically connected with the gear and connected with said agitator, and a pinion fixed to the driving shaft for meshing engagement with said gear.

1,988,549. REFRIGERATING APPARATUS. J. Lowell Gibson, Dayton, Ohio, assignor to Frigidaire Corp., Dayton, Ohio, a corporation of Delaware. Application Sept. 30, 1930. Serial No. 485,445. 7 Claims. (Cl. 62—125)

4. Refrigerating apparatus including a closed secondary refrigerant circuit comprising a refrigerant evaporator and con-



1,988,549

denser, said evaporator and condenser being connected by separate liquid and vapor conduits, said liquid conduit being connected to the lower portion of the condenser forming the outlet of the condenser, said secondary circuit being provided with a liquid trap providing a liquid seal for the outlet of the condenser for preventing the flow of evaporated refrigerant from the evaporator through the liquid conduit into the condenser, and a primary refrigerating means in heat exchange relation with the condenser for cooling the condenser and condensing evaporated refrigerant therein.

1,988,552. REFRIGERATOR DEFROSTING DEVICE. Claude W. Grever, Jr., Welch, W. Va. Application Sept. 9, 1931. Serial No. 561,907. 2 Claims. (Cl. 62—4)

1. In combination, a defrosting device for mechanical refrigerators of the type having a cooling unit and electric motor actuated means for operating the cooling unit, comprising, in combination, a switch interposed in the motor circuit, and a thermally closed switch interposed in the motor circuit and operatively engageable with the first named switch for closing said first named switch.

1,988,659. HEAT EXCHANGE APPARATUS. Walter Douglas La Mont, North Colebrook, Conn., assignor to La Mont Corp., New York, N. Y., a corporation of New York. Application April 23, 1930. Serial No. 446,546. Renewed June 2, 1934. 20 Claims. (Cl. 122—39)

1. A heat exchange apparatus comprising a plurality of tubes, means for delivering fluid into one end of each tube and causing it to flow therethrough in heat exchanging contact therewith, means restricting the cross sectional area at the entrance end of each tube for limiting the flow of the fluid into the tube, and means for reversing the direction of flow of the fluid being heated arranged in such relation to said restricting means that said reverse flow of the fluid within the heat exchanger is distributed by said restricting means so that said reverse flow in caused simultaneously through all said restricting means whereby foreign material is simultaneously removed therefrom.

1,988,745. HEATING AND VENTILATING UNIT. Richard H. Nelson, Moline, Ill., assignor to The Herman Nelson Corp., Moline, Ill., a corporation of Illinois. Application July 30, 1932. Serial No. 626,403. 9 Claims. (Cl. 257—137)

3. In a heating and ventilating unit, the combination of a cabinet provided in the rear of its base portion with a fresh air inlet and provided with an inlet for the recirculation of indoor air, a radiator extending lengthwise of the cabinet and terminating short of the ends thereof to afford spaces at each end of the radiator for the reception of piping, supply piping located within one of said spaces and connected with the intake end of the radiator, and return piping occupying the other of said spaces and connected with the return end of the radiator, an inner frame on which said radiator is supported, said frame being provided with legs for holding it in elevated relation with respect to the floor, and a fan assembly comprising a plurality of fan units and a motor, said fan assembly being located in the upper part of the cabinet, and having end units of the assembly extended above the spaces occupied by the pipe connections.

1,988,769. PREVENTION OF FROST FORMATION ON AUTOMATIC CONTROLS. Blair G. Aldridge and Edward G. Ragatz, Los Angeles, Calif., assignors to Union Oil Co. of California, Los Angeles, Calif., a corporation of California. Application Nov. 3, 1934. Serial No. 53,861. Term of patent 3½ years.

94,388

Angeles, Calif., a corporation of California. Application Sept. 2, 1933. Serial No. 687,957. 13 Claims. (Cl. 62—1)

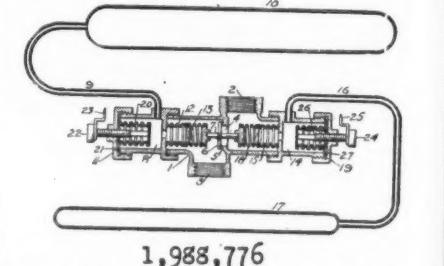
1. In an apparatus for refrigerating liquids and the like, an automatic control means and a non congealing moisture free substance surrounding and contacting said automatic control means to prevent frost from forming on parts of said automatic control means.

1,988,774. CONTROL MECHANISM FOR INTENITENT GAS REFRIGERATORS. Frank J. Bast, Queens Village, N. Y., assignor to Charles J. Tagliabue Mfg. Co., Brooklyn, N. Y., a corporation of New York. Application July 13, 1932. Serial No. 622,333. 20 Claims. (Cl. 236—99)

1. In a control mechanism for gas heated refrigerators, particularly for refrigerators operating on a cycle including a heating period in the boiler followed by a cooling period in the refrigerator compartment, the combination of a gas-tight casing having an inlet and an outlet adapted to be connected, respectively, with a source of gas and with the burner of the boiler, said inlet normally delivering gas into the interior of the casing for discharge through the outlet, a valve within the casing controlling the flow of gas therethrough, mechanisms positioned in the gas space in said casing and separately responsive to changes in the temperature in the boiler and in the refrigerator, and means associated with said valve and operated conjointly by said mechanisms to effect opening and closing of the valve when the temperature in the refrigerator and in the boiler, respectively, has risen to a predetermined value.

1,988,776. TEMPERATURE CONTROLLED VALVE. Victor A. Berghoefer, Milwaukee, Wis., assignor to Sterling Engineering Co., Milwaukee, Wis., a corporation of Wisconsin. Application Nov. 21, 1932. Serial No. 643,614. 17 Claims. (Cl. 236—99)

1. A temperature controlled valve, comprising a casing having an inlet thereto and an outlet therefrom, a valve for con-



1,988,776

trolling the flow of fluid from said inlet to said outlet, means responsive to variations in temperature outside said casing for operating said valve to vary the flow of fluid through said casing, and other means opposing the action of the aforementioned means and responsive to variations in temperature outside said casing to further vary said flow of fluid.

1,988,809. TEMPERATURE CONTROL SYSTEM. Joseph E. Robb, Topeka, Kans., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., a corporation of Delaware. Application Sept. 21, 1933. Serial No. 690,391. 3 Claims. (Cl. 236—91)

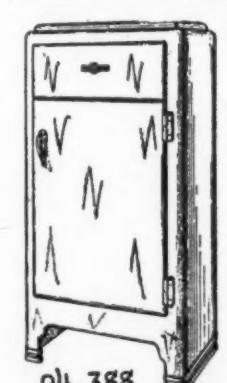
1. In combination, a heater for heating a fluid medium, an electrical device for controlling said heater, a space temperature responsive switch, a circuit including said switch and in control of said device, a fluid medium temperature responsive switch, means for raising and lowering the setting of said space temperature responsive switch, a third switch moved to close and open positions by said last named means, an outdoor temperature responsive switch, and a circuit in control of said device and including said third switch, fluid medium temperature responsive switch in series.

1,988,941. VALVE REGULATING MEANS. David H. Ebinger, Columbus, Ohio. Application June 9, 1932. Serial No. 616,282. Renewed June 20, 1934. 3 Claims. (Cl. 50—23)

1. In a valve structure, a casing formed to include spaced water inlet and outlet chambers, said chambers being in communication by a restricted port, a disk member normally closing said port, a diaphragm mounted in said casing and directly connected with said disk member, spring-pressed means engaging with said disk member and serving to maintain the latter normally in seated engagement with said port, manually operated devices cooperative with said spring-pressed means for removing the latter from engagement with said disk member, a second spring positioned between said disk member and said manually operated device, and means formed with said manually operated device for adjusting the tension of said latter spring.

DESIGN

94,388. DESIGN FOR REFRIGERATOR CABINET. Ralph E. Kruck, Springfield, Mass., assignor to Westinghouse Electric



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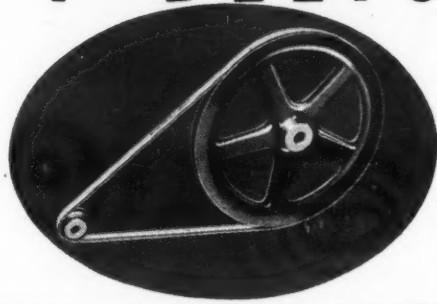
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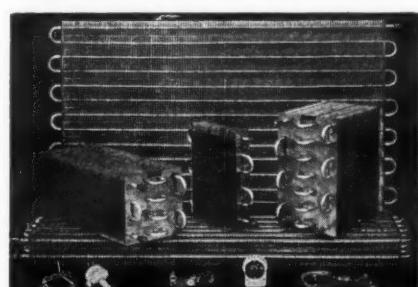
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1 subscription	\$3.00	\$5.00
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20 or more each	2.25	3.50
50 or more each	2.00	3.00
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For All Other Countries (Except Canada)

1 subscription	\$5.00	\$6.00	\$9.00
5 or more each	4.75	5.50	8.50
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20 or more each	5.25	4.50*	9.50*
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*Canadian subscribers are required to pay a tariff and excise tax on the Directory and Market Data Book which amounts to \$2.59. These extra charges on books will be collected by the Canadian postoffice at the time of delivery.

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QUESTIONS

Refrigeration Directory

No. 2052 (Manufacturer, Ohio)—"Please advise us the date of the last issue of your REFRIGERATION DIRECTORY AND MARKET DATA BOOK, also the cost of same. We now have a copy under this title dated October, 1932."

"Would also be glad to have you advise us who is the publisher of the magazine known as Electrical Dealer."

Answer: The 1934 REFRIGERATION DIRECTORY AND MARKET DATA BOOK was brought out about April 1 last year and the price was \$3 per copy.

The 1935 edition, which is now in the state of preparation, is to be issued in two volumes. Volume I will contain the names, addresses, and products of all manufacturers of refrigeration and air-conditioning equipment, parts, supplies, and accessories. It will be the buyers' guide section. This book is expected to be ready for distribution about Feb. 20.

Volume II will contain all available statistical matter pertaining to the electric refrigeration industry and will mainly be of interest to sellers of refrigeration equipment. The book should be ready for sale some time in March. The price for both volumes will be \$5.

Electrical Dealer is published by Bennett-Watts-Haywood Co., Chicago, Ill.

Industry Data for Speech

No. 2053 (Dealer, Arkansas)—"I will appreciate it if you will send me a little 'datter' that I can use on electric refrigeration in a talk before a Rotary Club, such as production, Federal taxes, etc."

Answer: Editor George Taubeneck wrote a review of refrigeration industry happenings in 1933 which was published in the 1934 REFRIGERATION DIRECTORY AND MARKET DATA BOOK. You should find many interesting facts in this review which you could include in your speech.

A similar review covering industry events in 1934 is now being published in Mr. Taubeneck's "Personalities" columns in the weekly issues of ELECTRIC REFRIGERATION NEWS. This review in its entirety will be published in the 1935 REFRIGERATION DIRECTORY AND MARKET DATA BOOK.

If you have past issues of the NEWS on file, you will find the latest figures on 1934 sales in the Jan. 2 issue. With respect to taxes, page 487 of the 1934 DIRECTORY gives the figures on excise taxes for the first year of the operation of the Revenue Act of 1932. Monthly statements concerning the amount of taxes paid by manufacturers in 1934 have been published in various issues of the NEWS throughout the past year, usually on the front page.

Commercial Issues of News

No. 2054 (Dealer, Illinois)—"I am enclosing \$3 for year subscription to the NEWS. I have been reading your publication for the last two years, but this year decided to subscribe for it myself."

"I would also like to know if it is possible to obtain past issues which were featuring special articles on commercial installations, air conditioning, etc. I would certainly appreciate any information you could offer me on this matter."

Answer: The second issue of ELECTRIC REFRIGERATION NEWS in each month of the year is designated the "Commercial Refrigeration Issue" and special editorial attention is given to news of commercial refrigeration applications. Fourth issue of each month is designated the "Air-Conditioning" issue, special attention being devoted to news of the air-conditioning field.

This does not mean that other issues are devoid of commercial refrigeration and air-conditioning news, but indicates that special attention is given to the subjects in the issues so designated.

Back issues of the NEWS are available at a cost of 10 cents each. We will be glad to select a number of issues in which special attention is given to commercial refrigeration and air-conditioning news and send them to you at this price.

Binks Mfg. Co.

No. 2055 (Dealer, California)—"Will you please furnish us with the street address of the Binks Mfg. Co., whose indoor forced draft cooling towers were mentioned on page 11 in the Jan. 9 issue of the NEWS."

Answer: Address of the Binks Mfg. Co. is 3114 Carroll Ave., Chicago.

Freon Price Story

No. 2056 (Distributor, Oregon)—"In a recent issue of your paper we note an article to the effect that the Kinetic Chemicals Co. had reduced the price of Freon to 10 cents per pound."

"As this is a tremendous reduction, we are wondering if it is not a misprint. Please advise us immediately."

Answer: This price was in error and a correction to this article was published on page one of the Dec. 12, 1934, issue of ELECTRIC REFRIGERATION NEWS.

Absopure Parts

No. 2057 (Reader, Ohio)—"We have an electric Absopure Baby Grand Refrigerator, and as they are out of business, will you please tell me where I could get a hinge for the door?"

Answer: Information concerning parts for Absopure refrigerators may be obtained by addressing Universal Cooler Corp., 7424 Melville Ave., Detroit, Mich.

POSITIONS AVAILABLE

ESTABLISHED MANUFACTURER desires district representative to service existing distributors and secure additional outlets for air conditioning and commercial refrigeration in Middle Atlantic States. Engineering knowledge and previous experience this type of work essential. Opportunity for permanent profitable connection to right man. Box 669, Electric Refrigeration News.

NATIONAL Refrigeration Corp., Dayton, Ohio, manufacturer of complete household line comprising five models has real proposition for manufacturers' agents now contacting hardware, furniture or radio accounts. National sells direct to dealer. Prices low, quality high. When writing give past records of accomplishment. National Refrigeration Corp., 924 East Monument, Dayton, Ohio.

ASSISTANT SALES MANAGER—Exceptional opportunity in fast growing Iowa organization making a sensational new electric appliance. Prefer man with Frigidaire, Kelvinator, General Electric or Westinghouse training. Also one who has successfully conducted dealer meetings. Not over 35 years of age. Only those letters giving complete information as to past and present experience, date of employment, names of firms affiliated with and names of references, and starting salary desired will be considered. Members of our organization know of this advertisement. Box 673, Electric Refrigeration News.

POSITIONS WANTED

INSTALLATION and service man with several years experience with both high and low pressure systems including household, also a graduate of Utilities Engineering Institute, desired position in western state or foreign country. Box 675, Electric Refrigeration News.

FACTORY or distributor employment desired by engineer experienced in organization and sales promotion of domestic and commercial refrigeration. Up to date on air conditioning. Utility trained in public relations. Pacific Coast territory preferred. Box 674, Electric Refrigeration News.

EQUIPMENT FOR SALE

IN YOUR 1935 Refrigeration Business, use our Proven Hermetic Pumps or Complete Units. Domestic or Commercial Refrigeration Systems. We build water coolers, bottle beverage coolers, zero temperature ice cream units, and domestic units. Precision built, efficient, dependable, small, compact, portable, low costs. Inquiries solicited. Units available for test purposes. Box 671, Electric Refrigeration News.

HIGHEST quality of isobutane ever sold. We ship isobutane in your cylinders. Five pounds \$1.50 per pound, ten pounds \$1.35, 25 pounds \$1.10, 50 pounds \$1.00, 80 pounds \$.80. Special quotation on 500 pounds or over. Order now before the rush. Standard Refrigeration Co., 1148 Dohrman St., McKees Rocks, Pa.

EQUIPMENT WANTED

500 USED apartment multiple coils, 8 cu. ft., with floats, service valves and trays. Examples: Frigidaire 5TF—\$3.50, No. 4—\$3.25. Kelvinator 08V—\$2.75. Feeders L28—\$2.75, E4S—\$2.50. Riser Valves 50¢, 3 valves in block \$1.50. Terms: F.O.B. Chicago, Ill., and cash with order. L. H. Rykken, 3434 Nordica Ave., Chicago, Ill.

WANTED commercial Frigidaire and Kelvinator equipment and parts. Also buy large refrigerators and large household Frigidaires. We have a representative in New Jersey and New York City. Lawton Huffman Co., Marshalls Creek, Pa. Phone Stroudsburg 18-R-5.

SCHOOLS

MEN: Train for Refrigeration and Air Conditioning, at home, using same text material you would use in best resident school. Supervised individual instruction under licensed teacher with Doctor's degree. Shoeck School, Alton, Ill.

PATENT SERVICE

HAVE YOUR patent work done by a specialist. I have had more than 25 years' experience in refrigeration engineering. Prompt searches and reports. Reasonable fees. H. R. Van Deventer (ASRE), Patent Attorney, 342 Madison Avenue, New York City.

REFRIGERATION SERVICE

HALETRIC thermostat repair service. B & B, G.E., Cutler-Hammer, Penn, Ranco, Tag, etc. Expansion valves repaired. Gas service, Ethyl, Methyl, Iso-Butane, Sulphur. Your cylinder or ours. Competitive prices. Halelectric Laboratory, 1793 Lakeview Road, Cleveland, Ohio.

For Sale or Lease

Manufacturing plant located in west-central Ohio. 200,000 sq. ft. floor space. Eight acres. Municipally owned power plant. Low rates. Electric elevators. Foundry facilities. Buildings sprinkled. Very low insurance. Pennsylvania and B&O sidings. Skilled labor immediately available. Will be sold outright for less than similar property can be leased for one year. Write for details.

Box 676, c/o Electric Refrigeration News

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